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Work/family Conflict as a Predictor of Employee Work Engagement of Extension Professionals

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To the Graduate Council:

I am submitting herewith a dissertation written by April B. Martin entitled "Work/family Conflict as a Predictor of Employee Work Engagement of Extension Professionals." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.

Michael L. Morris, Major Professor

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(Original signatures are on file with official student records.)

**Work/family Conflict as a Predictor of Employee Work Engagement of Extension
Professionals**

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

April B. Martin

December 2013

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DEDICATION

This dissertation is dedicated, first and foremost, to my Lord and Savior Jesus Christ, who makes all things possible. To my husband Gilbert, children Wyatt and Lily, and mother-in-law Betty: this would have not been possible without your love and support over the last several years. You waited patiently for me and sacrificed so much for me and it will never be forgotten. To my deceased parents, Colby and Margaret Brooks: thank you for instilling in me the desire to get as much education as I could and teaching the many life lessons that I am now teaching my children. I am eager for our reunion one day soon. Lastly, to all the Extension professionals across the United States: thank you for inspiring me to do this much needed research for our occupation. My hope is that it will improve our work/family lives.

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ABSTRACT

This study utilizes stress theory to explore the effects of work-family conflict and family-work conflict upon the work engagement outcomes of employees. Using a web-based questionnaire with a primary data sample of 2,782 full time Extension professionals in 46 states, this study incorporates the structural equation modeling analytic technique. This study confirmed the single, second order work-family conflict construct consisting of six first order constructs of work-family time, strain and behavior and family-work time, strain, and behavior. The bi-directionality of work-family conflict and family-work conflict was sustained. The structural equation modeling analysis found the following relationships: (1) a negative relationship between the antecedent work-family and the outcome employee work engagement; (2) global support and colleague support partially mediate work-family conflict and work engagement; and (3) non-work support partially mediates work-family conflict and work engagement. The hypotheses testing a partial mediating effect between work-family conflict, (1) supervisor support for work, personal, and family life and (2) non-work support, and the outcome employee engagement were not supported. Discussion and implications for researchers and practitioners are discussed.

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CHAPTER 1

INTRODUCTION

The work-family field has seen a profusion of empirical studies over the last forty years. The number of disciplines examining this issue has grown as well and includes research from not only family studies, but management, psychology, health, and economics fields (e.g. Kossek, Baltes, & Matthews, 2011; Kossek, Pichler, Bodner, & Hammer, 2011; Morris, 2009). As employees have begun to demand more work-family friendly benefits, organizations are realizing that their future existence depends, in part, on meeting these requests. The following vignettes represent common work-family issues that Extension professionals face every day.

Laurie has worked in a rural county as an Extension agent for over 15 years. She has had consistently strong performance evaluations throughout her career, is recognized as a leader among her colleagues and community, and has received numerous national awards from professional Extension associations. She has recently considered applying for a management position within her organization, but fears that being a wife and mother of two children will give the impression that she cannot manage a large workload.

Jim has been employed in an urban county for five years. He has aspirations of becoming county director, so he works diligently to try to make the right impression with his colleagues and supervisor. He regularly works overtime and quickly volunteers for new assignments. When his wife announces they will be having their first child, Jim wonders how he will handle taking leave for two weeks to assist with the new addition to their family. Taking parental leave for more than a few days for the birth of a child isn't exactly the "norm" for male Extension professionals. Jim wonders if this gives others the wrong perception of his ability to supervise a county staff.

Susan has worked for Extension for over 10 years in a rural county as a 4-H agent. She is single and has no children, but her aging mother's declining health requires Susan to care for her more frequently. It is not uncommon for Susan to work over 40 hours per week by conducting night and weekend meetings. Susan's direct supervisor, however, maintains that employees should be available at the office every day from 8 to 5. Susan has requested that she be allowed some flexible working hours due to her situation, but her supervisor feels that "face time" is important

and will not help her resolve the issue. Susan begins to consider other employment opportunities outside of Extension; she becomes disengaged at work, and eventually becomes depressed.

These vignettes illustrate how work-family conflict is a challenging issue within the workplace for Extension professionals who are the subject of this study. Until recently, work-family issues were viewed as being limited to single or married individuals with young children. Rather, work-family issues cross all demographics: gender, marital status, parental status, occupation, income, age, and race. There are a number of contributing factors to the work-family issue including increasing work and family demands, an increase in number of females in the workforce, generational value differences, technology, and care-giver status (e.g. Byron, 2005; Ensle, 2005; Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011; Kossek, Pichler, et al., 2011; Kutilek, n.d.; Kutilek, Conklin, & Gunderson, 2002; Lepley, 2004; Martin, 2001; Martin & Morris, 2005; Michel, Mitchelson, Kotrba, LeBreton, & Baltes, 2009; St. Pierre, 1984). The findings are telling when one considers:

- ✚ Over the last 25 years, the total number of weekly hours worked for dual-earner couples with children under 18 has increased by an average of 10 hours per week, from 81 to 91 hours (Bond, Thompson, Galinsky, & Prottas, 2002) .
- ✚ Approximately 73% of full-time workers wish they could spend more time with their families and compared to part-time workers, they are only half as likely to say they are happy with their work-life balance (Jones, 2006).
- ✚ In the past 25 years, employees reporting negative spillover between work and family domains has increased from 34% to 45% (Bond et al., 2002).
- ✚ Child care related issues account for 72% of absenteeism rates. The United States Department of Labor estimates that women comprised 59% of the labor force in 2009 and

66% of women with children under the age of 17 work either full time or part time ("Fact Sheet #28: The Family and Medical Leave Act of 1993," 2006).

- ✚ Currently there are four generations in the workforce: veterans, baby boomers, Gen X, and Gen Y (i.e. Millennials). While every generation has its' unique perspectives, values, and ideas, this conglomeration is creating work-family challenges that organizations must address ("The Increasing Call for Work-Life Balance," 2009).
- ✚ Technological advances and our dependence upon them have created an added dimension of stress to the work-family interface.
- ✚ There are an estimated 44.4 million American workers age 18 and over providing unpaid care for an adult age 18 and over. Nearly 74% of those caring for an adult over the age of 50 are working: the majority of those work full-time ("The MetLife caregiving cost study: Productivity losses to U.S. business.," 2006).
- ✚ In the upcoming years there will not be enough new workforce entrants to replace the people who are (and will be able), due to their age, exiting the workforce to retire (SHRM, 2008).
- ✚ Approximately 21% of employees report that they are currently being treated for high blood pressure and 14% for high cholesterol (Aumann & Galinsky, 2009).
- ✚ According to the American Institute of Stress, 79 to 91 percent of doctor visits are related to stress and they cost industry between \$200 billion to \$300 billion per year ("Gallup Healthways Well-Being Index," 2009) and only 1 in 5 employees are highly engaged in their work (Attridge, 2009).
- ✚ According to research by the Corporate Executive Board among more than 50,000 global employees, work-life balance ranked as the second most important workplace attribute ("The Increasing Call for Work-Life Balance," 2009).
- ✚ The Society of Human Resource Management (SHRM) recently issued the top workplace trends for 2010 that require organizational responses to positively influence key performance indicators of the organization. Several of these trends are related to work/family balance including:
 - Work/life balance issues and its influence upon employee stress levels.

- An aging workforce has created a need for employers to deal proactively with the needs of employees dealing with elder care and child care.
- The need for workplace flexibility policies such as telecommuting, flexible schedules, job sharing, compressed work weeks, and on-ramping and off-ramping in order to attract and retain the best talent (Clark & Schramm, 2009).

Within the general population at least five substantial changes have been occurring in the workplace in recent years which has resulted in considerable work-family stress for employees and organizations. These include (1) mergers, acquisitions, and layoffs; (2) globalization; (3) a shrinking pool of talent (i.e. fewer employees with the necessary knowledge and skills); (4) difficulty keeping pace with technological advances; and (5) a growing level of workforce diversity (Morris, 2008). For employees, these changes have led to increased number of hours worked, increased number of women in the labor force, the organizations' expectations for employees to do more with fewer resources, and job insecurity. Intermingled with these stressful changes is the issue of work-family/family-work conflict (WFC/FWC) which has been brought to board rooms across the country.

Work-family conflict and family-work conflict are generally regarded in the empirical literature as having a reciprocal relationship (Carlson & Perrewe, 1999; Greenhaus & Beutell, 1985). For ease in reading, from this point forward they will be referred to as work-family conflict. Unless otherwise noted, it will be understood that work-family conflict refers to both types of conflict.

As these previous statistics indicate, the work-family stressors are evident in almost every occupation and industry in the United States. One occupational group which has received limited attention related to this issue is the extension professional (e.g. Kutilek et al., 2002; Martin, 2001; St. Pierre, 1984; Weyhrauch, Culbertson, Mills, & Fullagar, 2010). (Note: extension professionals have various titles depending upon the state in which they work. Common titles are “extension agent” and “extension educator.” In this study, they will be referred to as “Extension professionals.”). As the earlier vignettes illustrated and work-family research has shown, the occupational stressors associated with work-family conflict for professionals, including Extension professionals, can have negative professional and personal outcomes and deserve increased research attention.

Studies using Extension occupational samples to examine the impact of work-family conflict on work engagement are almost non-existent. To date, most Extension-related research has focused upon job satisfaction, engagement, retention, burnout, and stress (e.g. Bowen & Radhakrishna, 1994; Douglas, 2005; Ensle, 2005; Fetsch & Kennington, 1997; Kutilek et al., 2002; Martin & Morris, 2005; Nestor & Leary, 2000; Safrit, Gliem, Gliem, Owen, & Sykes, 2009; Scott, Swortzel, & Taylor, 2005; Sears, Urizar, & Evans, 2000). More specifically, and relevant to the purpose of this study, extension studies that use work engagement as an outcome of work-family conflict are virtually non-existent. This study seeks to fill this gap in the literature.

Purpose of the Study

This study will examine the relationship between work-family conflict and work engagement, as well as the mediating effects of work and non-work social support among Extension professionals across the United States. Due to the disparity in the literature of work engagement or social support in an Extension population, it will be necessary to rely upon parallel literature for discussion.

Rationale

The phenomenon of work-family conflict has been frequently described in the popular press. Some bookstores have even devoted entire sections on the topic to help individuals. Literature connecting work engagement to work-family conflict or family-work conflict of Extension professionals is virtually non-existent, thus providing a need for this study. Within the general population, the rationale for research that examines the relationship between work-family conflict and work engagement is well warranted, and is driven by at least four macro-level factors: (1) socio-demographics (Byron, 2005; Casey & Denton, 2006); (2) litigation (Calvert, 2010; "Work Life Law," 2009); (3) health of employees (Kelloway, Gottlieb, & Barham, 1999); and (4) engagement of workers (e.g. Bakker, Demerouti, & Xanthopoulou, 2012; Bond, Galinsky, & Hill, 2005; Harter, Schmidt, & Hayes, 2002a; Hill, 2005; Hooper, Coughlan, & Mullen, 2008; Sonnentag, 2011).

Socio-demographic Factors

While there are a number of other macro-level factors which drive work-family conflict, socio-demographics factors are some of the most prominent and will now be discussed.

Work factors and non-work (family) factors accounting for the majority of the issues related to socio-demographics include parental status, marital status, elder care, and generational differences.

According to a 2010 Bureau of Labor report, in nearly 67% of couples with children under age 18, both partners were employed. Meta analytic research has typically shown that employees with children, particularly young children, have greater difficulty with work-family conflict than those without children. Also, dual earner couples tend to have more work-family conflict than couples with only one spouse employed (Byron, 2005; Sharpe, Hermesen, & Billings, 2002). However, Hegtvedt (2002) suggested that single individuals or couples without children are encountering more difficulty with work-family conflict. These employees often resent co-workers who may have more work-family policies and benefits at their disposal due to their parental or marital status and they are beginning to demand to employers that they be afforded equal or parallel access (Hegtvedt, 2002).

A second socio-demographic factor related to work-family conflict is generational differences. A plethora of studies have found that Gen-Xers (those born between 1965 and 1980) and Gen-Yers (those born between 1980 and 2000) place a strong emphasis on work-family or

work-life benefits when searching the job market. These generations also come to work with preconceived notions of the workplace environment and culture. They want to receive compensation for work produced rather than “face time” at the office (e.g. Casey & Denton, 2006; Dilsworth & Kingsbury, 2005; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Healy, 2005; SHRM, 2008; Sloan Work and Family Research Network, 2006).

A third emerging socio-demographic issue related to work-family conflict is elder care. The Work Family Institute (2005) estimated in 2008 that 54 percent of the workforce would be caring for an elder as baby boomers begin to age. In a 2006 MetLife study of 1,247 caregivers almost six in ten caregivers worked while providing elder care. Almost 62 % had to make work life adjustments such as arriving at work late or leaving work entirely. Many workers find themselves in the “sandwich generation,” where they have to care for both children and an elder. Often times, the primary care provider is a female who has multiple roles including being a wife, mother, daughter, and employee.

Until recently, the work-family issue was limited to dual-earner couples with children and generally females accounting for the largest demographic group being studied (Bond et al., 2005; Byron, 2005). More recently, this issue has expanded to include more males and unmarried employees (Hegtvedt, 2002). As the baby boomer generation begins to age, care giving has expanded to include elder care as well as child care. Workers from all socio-demographics, particularly those from the Gen-X and Gen-Y are beginning to demand more

flexible working arrangements (e.g. Casey & Denton, 2006; Dilsworth & Kingsbury, 2005; Quinn, 2001; SHRM, 2008). Thus, socio-demographics such as parental status, care giving responsibilities, and generational differences, are a tremendous factor driving the need for more research in work-family conflict.

Litigation Factors

Litigation factors are a second macro-level factor driving the need for research in work-family conflict. Work-family conflict has gradually created an increase of work-family related litigation. The Center for Work Life Law cites *family responsibilities discrimination* (FRD) as a trend in the legal field of discrimination cases. FRD exists when an employee is discriminated against because of their family care giving responsibilities. FRD cases increased nearly 400 percent from 97 cases in 1986 to 485 in 2005 with action taken against city and state governments, universities, Fortune 500 companies, and numerous private organizations. The mean award was \$578,316 ("Work Life Law," 2009). Calvert (2010) noted a case in 2004 in California that was awarded \$5,224,273 when an employee was laid off for being pregnant. In 2007, a store manager in Ohio was awarded \$2,100,000 when he was denied promotion because he had children.

In May 2007 the United States Equal Employment Opportunity Commission (EEOC) issued a new enforcement guidance advising that discrimination can take the form of different treatment of men and women with young children such as selecting fathers instead of mothers or

an employee without children over an employee with children for a promotion. The purpose of the enforcement guidance was to assist investigators, employees, and employers in determining whether a particular employment decision involving a caregiver is unlawfully discriminating according to the Title VII of the Civil Rights Act of 1964 or the American with Disabilities Act of 1990 ("Work Life Law," 2009).

In addition to the federal law, state and local laws are beginning to address family responsibility issues. Alaska, the District of Columbia, New Jersey, and Connecticut have statutes related to familial responsibilities and five more states have pending legislation. Additionally, at least 63 cities, counties, or other entities in 22 states have laws that specifically created a protected class ("Work Life Law," 2009).

Litigation related to family responsibility issues is fast becoming a growing practice. Since the costs to businesses and organizations can be extremely high, litigation factors will continue to be part of the rationale driving the research in work-family conflict.


Health Factors

Health is a third macro-level factor which is strongly driving the research in work-family conflict. In the last 30 years, studies in the general population have discovered that the health of employees has been negatively affected by prolonged and extreme stress levels (e.g. Allen, Herst, Bruck, & Sutton, 2000; Grzywacz, Carlson, & Shulkin, 2008; Heraclides, Chandola, Witte, & Brunner, 2009; Karlsen, Dybdahl, & Vitters, 2006; Kemery, Mossholder, & Bedeian,

2012; Melchior, Berkman, Niedhammer, Zins, & Goldberg, 2007; Nieuwenhuijsen, Bruinvels, & Frings-Dresen, 2010; Nixon, Mazzola, Bauer, Krueger, & Spector, 2011; Rosch, 2009; Sparks, Cooper, Fried, & Shirom, 1997; Wardle, Chida, Gibson, Whitaker, & Steptoe, 2012). There is a biological connection in which stressors set off hormones which travel through the bloodstream and distress the body's organs. This process is slow and the effects can have an effect on organs longer than the period of time of the actual stressor (Kelloway et al., 1999; Nixon et al., 2011). A recent meta-analysis indicated that occupational stress in the form of organizational constraints, interpersonal conflict, and workload contributed significantly to sleep disturbances and gastrointestinal problems (Nixon et al., 2011). The National Institute for Occupational Safety and Health identified work and family conflict as one of the top ten major stressors in the workplace (Schaufeli, Salanova, Gonz'alez-Roma', & Bakker, 2002).

National assessments of workplace trends by human resource management professionals ranked continuing high cost of health care in the United States as the top workplace trend in 2008, 2009 and more recently in 2011. Implementing preventive health programs ranked number ten in 2008 and number nine in 2011 for actions organizations have taken in response to this trend (SHRM, 2008, 2011).

The 2008 National Study of the Changing Workforce assessed the state of health in the American workforce and found some disturbing findings including:

-  Less than one-third (28%) today say their overall health is “excellent.”

- ✚ One-third (28%) show signs of clinical depression.
- ✚ More than a quarter (27%) has experienced sleep problems that affect their job performance in the last month at least *sometimes* (Aumann & Galinsky, 2009).

As evidenced by the growing healthcare financial crisis and the statistics provided, employee health outcomes will continue to be one of the most significant drivers associated with research in work-family conflict.

Engagement Factors

A fourth major macro-level driver for this study is the growing body of research on employee engagement. Today's competition for talent is intense. Successful employers no longer speak of employees as mere workers, but of human capital that can demonstrate a return on investment. Employees drift between companies and organizations looking for the one that fits their needs. Thirty years ago, salary and a pension were the "carrot" used to attract new talent. Today's worker, both young and more mature workers, are searching for companies that include work-life balance and flexible work arrangements (e.g. Meister & Willyerd, 2010; Newman, 2011; SHRM, 2011; Shultz, Wang, Crimmins, & Fisher, 2010).

As a result, employee engagement has become an aspect of human resources which is becoming more and more vital to the success of businesses and organizations. Meta-analyses have shown that engaged employee populations are providing a competitive edge to the organization (Harter, Schmidt, & Hayes, 2002b). The 2003 Towers Perrin Talent research

(Perrin, 2008) on employee engagement around the world has found between 11 and 19 percent of employees to be highly engaged, between 40 and 70 percent to be neutral or middle of the road, and 10 to 20 percent to be disengaged in their work. The effects of disengagement can prove economically staggering to a business or organization. A 2007 Gallup poll estimates that 18 percent of American workers are disengaged which equates to a loss of productivity equivalent to \$334 to \$431 billion dollars (Wellins, Bernthal, & Phelps, 2005).

Numerous studies and popular press articles discuss the desire by employees to have more flexible work schedules and it is even now being discussed in legislation in numerous states (e.g. Edmondson & Detert, 2005; Galinsky et al., 2005; Hill et al., 2008; Jones, 2006; Palmer, 2006; Pitt-Catsouphes & Shulkin, 2005; Sharpe et al., 2002; SHRM, 2008). In a large national study, Bond, Galinsky, and Hill (2005) found that greater access to flexible work arrangements created better health, job satisfaction and engagement, as well as lower turnover intention. Similarly, there is increasing demand from employees for alternate work arrangements such as telecommuting, job sharing, on-ramping and off-ramping (e.g. Arthur & Cook, 2004; Casey & Morrison, 2007; "Costly problem of unscheduled absenteeism continues to perplex employers," 2005; Duxbury, Higgins, & Mills, 1992; Frank & Lowe, 2003; Healy, 2005; Hooks & Higgs, 2002; Robèrt & Börjesson, 2006).

Literature connecting employee engagement to work-family conflict of Extension professionals is virtually non-existent, thus providing a need for this study. One would expect

that employees would find it difficult to be highly engaged at work when the level of work-family conflict or family-work conflict is high.

Employee engagement will continue to be a significant factor driver in the work-family field of research. As employers search for ways to retain talent and to have a productive workforce, it will be imperative to find ways to address the work-family issue so that employees will remain engaged at work.

Rationale for Research of Employee Engagement and Extension Population

As previously noted, the rationale for work-family conflict research within the general population will continue to be driven by multiple macro-level factors including work and non-work sociodemographics, litigation, employee engagement, and health of employees. Before discussing the rationale for this research more specifically within the Extension population, a clarification of the history, role, and challenges of the Extension occupation will assist in understanding the problem that this profession faces.

The Cooperative Extension Service was established in 1914 by the Smith-Lever Act and as part of a partnership between land-grant universities, local governments, and the United States Department of Agriculture (USDA). Extension is unique in that its primary mission is to make the agriculture and family consumer science research of land-grant institutions, agricultural experiment stations, and the USDA available to everyone. This research is disseminated at the county level by trained Extension professionals (i.e. Extension Agents, Extension Educators,

etc.) who are employed by the land-grant colleges and local county government. There is at least one professional Extension staff member located in over 3,150 counties and over 14,000 additional employees in addition to district, regional, and state offices and in the territories of Guam and Puerto Rico (Martin, 2001).

Extension staffs are employed at 1862, 1890 and 1994 higher education institutions. The Morrill Land Grant Acts provided legislative funding for land grant colleges across the United States. The 1862 higher education institutions are those which were provided federal funding by the first Morrill Act of 1862. The 1890 higher education institutions are those which were provided federal funding by the second Morrill Act of 1890 due to segregation. The 1890 higher education institutions were founded for the education of African-Americans and are primarily located in the Southern Region of the United States. The 1994 higher education institutions are those which primarily serve people of American Indian descent.

At the local level the Extension office can be a frantic place to work. The Extension professional role has been described as a 24/7 occupation, where the employee is addressing clientele's developmental and educational needs, volunteers' frustrations and struggles, and serving as an information and support resource for communities. In many instances, they are required to report to more than one supervisor within multiple program areas for local/county, regional/district, and state levels. As Fetsch and Kennington (1997) noted, "Extension

professionals are often required to work under multiple systems, report to multiple supervisors, and oversee multiple programs” (p. 3).

The majority of Extension professionals reside in the community in which they work, and are many times perceived as a source of information, regardless of the setting. Agents are required to multi-task issues related to farmers, homemakers, priority programming, youth programs, local and state governments, professional development, program planning, reporting, and evaluation. For Extension professionals in a split position where they are responsible for multiple program areas (i.e. 4-H, agriculture, family consumer science, etc.) as opposed to an employee who is responsible for one program area, requirements to juggle the multiple demands at work are even more intense. This can lead to work overload, a form of stress.

Extension professionals, in creating healthy boundaries between work and family, have difficulty leaving their work at work. Many of these professionals work long hours, often at night and on the weekend, without any flextime benefits. The job complexities of this occupation often create a blurring of the boundaries between the work and non-work domains.

The lack of formal work-family policies such as flex-time, telecommuting, compressed work week and/or lack of a supportive work-family culture make it difficult for many to balance their work and non-work lives. In 1981, the Extension Committee on Organization and Policy (ECOP) recommended that administrators examine the effects of policies and practices on the family life of Extension professionals (ECOP, 1981). Aside from the Family and Medical Leave

Act (FMLA) work- family policies and initiatives appear to be needed nationwide within the field of Extension. In a pilot study between March–May of 2006 I contacted every 1862 state Extension Director in the United States via email and asked what work/family policies or initiatives were available for Extension Agents in their state. Sixteen out of the 53 Extension Directors responded, providing a 30 percent response rate. Of the 15 respondents, only Texas, Washington, Kansas, North Carolina, Ohio, Colorado, and Wisconsin had formal work-family policies for Extension employees. California and Tennessee have work/family policies such as compressed work-week and telecommuting at nearly every campus, but they are broadly addressed to on campus employees and not specifically accessible to Extension Agents. South Carolina, Vermont, Florida, Alabama, and Tennessee encourage their employees to balance their work and family, but there are no formal policies or initiatives. These data suggest that work/family issues have largely been ignored or inadequately addressed on a national level by Extension.

Empirical research examining work engagement within Extension profession is virtually non-existent. A recent study at Kansas State University that tracked 67 Extension agents for two weeks found that invigorated and dedicated employees transferred their positive experiences over into a happier home life (Hodges, 2009). More research is needed with this occupational group. Given the multiple roles which these employees must assume, past exit interviews indicating work-family conflict as a reason for leaving the profession (e.g. Clark, Norland, &

Smith, 1992; Ensle, 2005; Kutilek, 2000; Kutilek et al., 2002; Rousan & Henderson, 1996), and a lack of work-family/work-life policies within these organizations, it would be beneficial to study the role of engagement and its' relationship to work-family conflict .

In summary, similar to the general population, the rationale for work-family conflict research within the Extension professional population will continue to be driven by multiple macro-level factors including work and non-work socio-demographics, litigation, and employee engagement.

Problem Statement

Empirical research with other occupational groups has shown that the work-family conflict that employees face can often diminish their work engagement (Rothbard, 2001; Weigl et al., 2010). However, there is a lack of research specifically examining how work-family conflict of Extension professionals diminishes their work engagement. Further, there is a lack of research demonstrating how these relationships can be mediated through available support systems at work (organizational, supervisor, and colleague) and away from work (spouse and family). This study seeks to better understand these relationships.

Although there is only one recent study (Hodges, 2009) examining engagement as an outcome among Extension employees, research findings for the general population in the last decade indicate that both work-family conflict and family-work conflict can have negative

impacts upon employee engagement. A recent study of Kansas Extension employees found that those who were highly engaged at work tended to have a happier home life (Hodges, 2009).

Despite the growing research examining the relationships and effects of work- family conflict, work and non-work social support, and work engagement, no research exists examining the Extension professional occupation. Using a sample representing 46 states my objective is to examine these relationships, determine the effects that work-family conflict has upon work engagement, and the mediating effects that work-support and non-work support have on work-family conflict and work engagement.

Latent Constructs and Manifest Variable Nominal Definitions

The following section will give an overview of the conceptual definitions for the latent antecedent, mediator, and outcome constructs along with their manifest variables. Table 1.1 (also see Appendix A), shown at the conclusion of this section's discussion, provides a listing of the abbreviations used for the constructs in this study. Instrumentation used to assess these variables will be discussed in detail in Chapter 3.

Antecedent Latent Constructs

Work-family conflict (WFC). Work-family conflict (WFC) is a form of inter-role conflict in which the *time-based*, *strain-based*, and *behavior-based* demands from the work and family domains are incompatible (Greenhaus & Beutell, 1985). The research community

Table 1.1 Listing of Abbreviations

Abbreviation	Construct/Variable
WFC	Work-family Conflict
FWC	Family-work Conflict
ENGAGE	Work Engagement
GLOSUPSUP	Global Supervisor Support
SUPSUP	Supervisor Support for Work, Personal and Family Life
COLSUP	Colleague Support
NWSUP	Non-work Support
FAMSUP	Family Support for Work and Non-work Roles

generally recognizes the bi-directional relationship of the work to family conflict construct.

When work-family conflict (WFC) is discussed, there is an acknowledgement, that unless otherwise specified, WFC refers to both work-family conflict (WFC) and family-work conflict (FWC). It should be noted, however, that in the structural model, work-family conflict (WFC) and family-work conflict (FWC) are distinct and separate latent constructs. This construct will be assessed using the work-family conflict (WFC) and family-work conflict (FWC) scales (Carlson, Kacmar, & Williams, 2000) which will be discussed further in Chapter 3.

Outcome Latent Constructs

Work engagement (ENGAGE). Work engagement (ENGAGE) is a latent construct consisting of three sets of manifest variables (vigor, dedication, and absorption). Schaufeli et al. (2002) defined engagement as “A positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (p. 74). Engagement (ENGAGE) proposes a continual and all-encompassing affective-cognitive state and “is not focused on any particular object, event, individual, or behavior” (p. 74). Engagement (ENGAGE) consists of three manifest variables including vigor, dedication, and absorption (Schaufeli et al., 2002). The work engagement construct will be assessed using the Utrecht Work Engagement Scale (Schaufeli et al., 2002) and will be discussed further in Chapter 3.

Mediator Latent Constructs – Work Support

Global supervisor support (GLOSUPSUP). Global Supervisor Support (GLOSUPSUP) is a latent construct which measures the degree to which supervisors provide emotional, informational, instrumental, and appraisal support (Lawrence, Gardner, & Callan, 2007). The Support Appraisal for Work Stressors – Supervisor (GLOSUPSUP) Scale will be used to assess this construct and will be discussed in detail in Chapter 3. This scale has been used in a handful of studies (e.g. Harter, Schmidt, & Killham, 2003; Hill, 1949; Lawrence et al., 2007; Llorens, Bakker, Schaufeli, & Salanova, 2006) and has been found to provide a buffering effect between conflict and outcomes such as work engagement (ENGAGE).

Supervisor support for work, personal and family life (SUPSUP). Supervisor support for work, personal and family life (SUPSUP) is a latent construct which measures the extent to which managers or supervisors understand their employee's need for balance between work and family. Additionally, this construct measures the level of concerted effort given to help the employee accommodate his or her work (Bond et al., 2005). Thomas and Ganster (1995) defined supervisor family support as being "sympathetic to the employee's desire to seek balance between work and family and engaging in efforts to help the employee accommodate his or her work and family responsibilities" (p. 7). This construct will be assessed in this study using the Supervisor Support to Manage Work, Personal and Family Life (SUPSUP) Scale and will be discussed in detail in Chapter 3 (Bond et al., 2005). In comparison to the support appraisal for work stressors – supervisor (GLOSUPSUP) latent construct, which measures general work support, the supervisor support for work, personal and family life (SUPSUP) latent construct is more specific for managing work, personal, and family life.

Colleague support (COLSUP). Colleague Support (COLSUP) is a latent construct that measures the degree to which colleagues provide emotional, informational, instrumental, and appraisal support (Aryee, Luk, Leung, & Lo, 1999). Colleague work support is assessed in this study using the Support Appraisal for Work Stressors – Colleague (SAWSCO) Scale which consists of three subscales: emotional, informational, instrumental, and appraisal support. This

scale has been used in a handful of studies (e.g. Harter et al., 2003; Lawrence et al., 2007; Llorens et al., 2006).

Mediator Constructs – Non-work Support

Non-work support (NWSUP). Non-Work (NWSUP) is a latent construct that measures the degree to which partner, family and friends provide emotional, informational, instrumental, and appraisal support. This construct will be assessed in this study using the Support Appraisal for Work Stressors – Non-work (SAWSNW) Scale which consists of three subscales: emotional, informational, instrumental, and appraisal support. This scale has been used in handful of studies (e.g. Harter et al., 2003; e.g. Lawrence et al., 2007; Llorens et al., 2006).

Family support for work and non-work roles (FAMSUP). Family support for work and non-work roles (FAMSUP) is a latent construct consisting of support systems found away from the workplace including spouse/partner, other family, and friends. This construct will be assessed in this study using the Family Support for Work and Non-work Roles (FAMSUP) scale. The original scale did not include items using the word “spouse.” Using the exact same wording as the FAMSUP scale, I created items that measured spousal support (“spousal” was inserted for “family”), and it was merged into the Family Support for Work and Non-work Roles Scale.

Research Questions

This study will attempt to answer the following questions about employees in the Extension occupation:

1. How do various dimensions of work-family conflict affect employee work engagement?
2. How do the dimensions of work support and non-work support mediate the relationship between work-family conflict and work engagement?

As the model in Figure 1.1 suggests, the employee work engagement outcomes are influenced by work-family conflict (WFC) and these relationships may be mediated by social work support (supervisor and colleague) and non-work support (spousal/partner and family support).

Theoretical Foundations

The theoretical framework for this study is grounded in and driven by stress theory. A brief overview of stress theory will be followed by a discussion of the ABC-X stress model and its' applicability to work-family conflict and family-work conflict in this study.

Stress Theory

Numerous theories and models such as person-environment fit (Caplan, 1987); demand control (Karasek, 1979); transactional theory (Lazarus & Folkman, 1984); and conservation of six sequential elements are present: (1) occurrence of an life event or demand; (2) primary and secondary appraisal; (3) resources (existing and expanded); (4) an affective or emotional reaction; (5) a response in the form of coping and (6) outcomes (positive and negative)

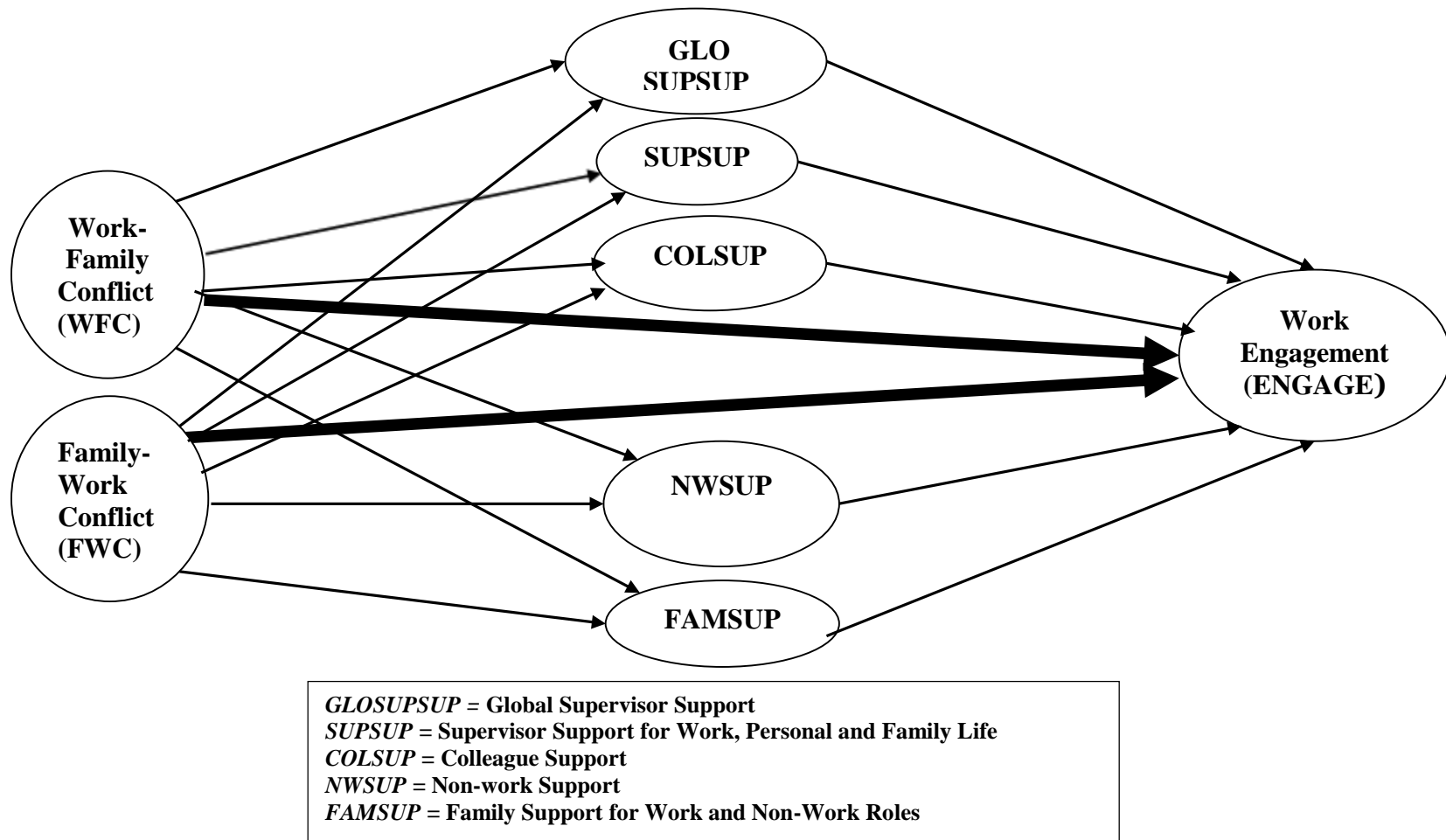


Figure 1.1 Conceptual Models of Employee Work Engagement Outcomes of WFC and FWC

(MacDermid & Harvey, 2006). Within these theories, numerous definitions of stress at the individual level have emerged. In the 1930's, Hans Selye, M.D. was the first to define and measure individual stress in the human body. He defined stress as "a specific syndrome which consists of all the nonspecifically-induced changes within a biologic system" (p. 64) (Selye, 1978). In organizations, Kahn (1964) defined stress as role ambiguity and then as person-environment fit. Quick, Quick, Nelson, and Hurrell (2003b) defined stress in an overarching way as how "individuals and organizations adjust to their environments; achieve high levels of performance and become distressed in various physiological, medical, behavioral, or psychological ways" (p.2-3). As the American Institute of Stress (Rosch, 2009) indicates, stress is difficult to define due to its subjective nature. Also, stress is not always synonymous with distress. Stress which creates fear or anxiety for one person can create positive experiences for another.

Stress is the cognitive, emotional, physiological, and behavioral response to an individual's perception that their demands have exceeded their resources. Specifically, stress consists of a *stressor or demand* and *the stress response* (Quick et al., 2003b). As the various stress models in the empirical literature are considered, the predominant work-family stress theory that includes many of these six sequential elements previously discussed is the ABCX model (Figure 1.2) proposed by Hill (1949). A brief discussion of the ABCX model used in this study now follows.

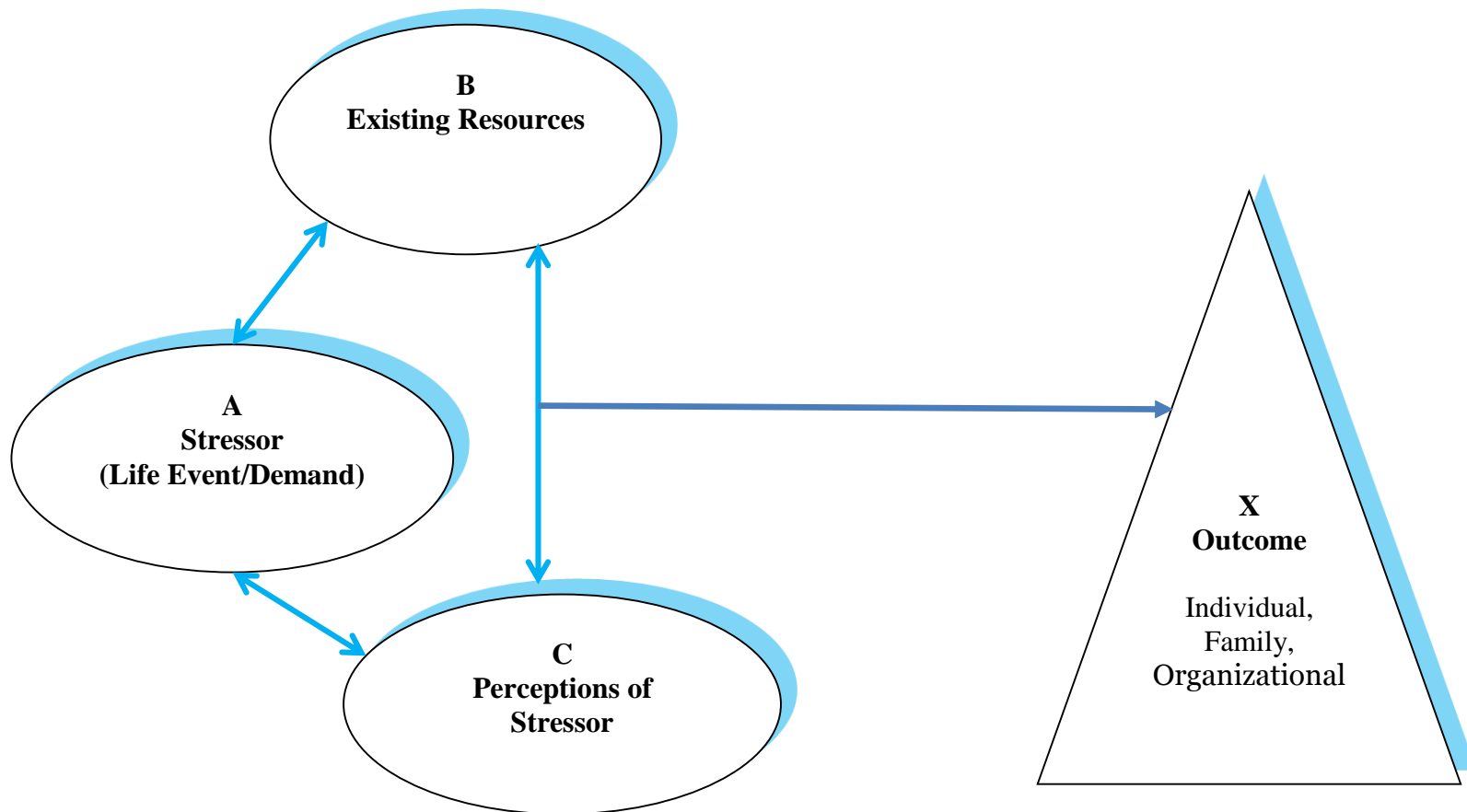


Figure 1.2 Proposed Model of Stress (ABC-X Model) (Boss, 1988; Hill, 1949; McCubbin & Patterson, 1983)

ABCX Crisis Model

Emerging from the field of sociology, Hill (1958) provided the initial theoretical groundwork for research examining the differences in the ways that families managed stress during WW II. Hill proposed the ABCX crisis model that focused upon “pre-crisis variables”:

*A (the stressor event) interacting with B (the family’s crisis meeting resources) – interacting with C (the definition the family makes of the **event**) –produce X (the crisis) (Hill, 1958) (as cited in McCubbin (1983),(p. 6).*

Stressor and hardships: Demands (A factor).

Stress theory suggests that a *stressor* (or demand) is a life event or transition which leads to a stress response and activates a chain of psychological-physical activities. *Demands* and *stressors* are generally used interchangeably, but there is a debate among researchers as to whether each should be globally defined or specifically defined. A stressor (demand) can be a situation, an object, or person which causes stress (McCubbin & Patterson, 1983).

A stressor (event) is defined as a life event or transition which impacts the family and produces change (McCubbin & Patterson, 1983). A stressor event should not be confused with stress. A stressor event is a beginning point for change and ensuing stress. It has the capability to increase the level of stress for a family (Boss, 1988). Examples of life events include divorce, birth of a child, losing a job, death of a family member, etc. Family hardships are also part of the *A factor* and are defined as the demands of the family which are related to the stressor event. An example of a hardship event would be a wife having financial difficulties and returning to the

workforce following the death of her spouse. Clearly, this would create a hardship with the loss of the spouse.

Stressor events can be classified in various ways. It is helpful to identify the type of stressor event in order to choose a response to the situation. Boss (1988) identified 12 classifications of stressor events as shown in Table 1.2. Some stressor events are considered *predictable* since they occur normally in daily life. Examples include normal stressors such as the birth of a child, death of a spouse, a child graduating high school and leaving home, a young couple getting married, and an older couple retiring. Other stressor events are considered non-normative stressor events because they are unexpected events and are due to an unexpected situation which was not predictable. Examples include natural disasters such as flood, earthquake, or fire and non-disastrous stressors such as getting a job or promotion at work. It is important in this study to note stressor events or demands which may emerge from the workplace. Quick et al. (2003a) proposed that there are four major categories of organizational demands and stressors: (a) physical demands (i.e. indoor climate and air quality, temperature, illumination and other rays, noise and vibrations, and office design); (b) task demands (i.e. occupational category, routine job, job future ambiguity, interactive organizational demands, and work overload); (c) role demands (i.e. role conflict, role ambiguity, and work and home demands); and (d) interpersonal demands (i.e. status incongruity, social density, abrasive personalities, leadership style, team pressure demands, and diversity).

Table 1.2 Classification of Stressor Events (Boss, 1988)

PREDICTABLE STRESSORS	UNPREDICTABLE STRESSORS
INTERNAL Events that begin from someone inside the family, such as getting drunk, suicide, or running for election.	EXTERNAL Events that begin from someone or something outside the family, such as earthquakes, terrorism, the inflation rate, or cultural attitudes toward women and minorities.
NORMATIVE: Events that are expected over the family life cycle, such as birth, launching an adolescent, marriage, aging, or death.	NON-NORMATIVE: Events which are unexpected, such as winning a lottery, getting a divorce, dying young, war, or being taken hostage. Often, but not always disastrous.
AMBIGUOUS: You can't get the facts surrounding the event. It's so unclear that you're not even sure that it's happening to you and your family.	NON-AMBIGUOUS: Clear Facts that are not sought out but just happen, such as being laid off or the sudden loss of someone loved.
VOLITIONAL: Events that are wanted and sought out, such as a freely chosen job change, a college entrance, or a wanted pregnancy.	NON-VOLITIONAL: Events that are not sought out but just happen, such as being laid off or the sudden loss of someone loved.
CHRONIC: A situation that has long duration, such as diabetes, chemical addiction, or racial discrimination.	ACUTE: An event that lasts a short time but is severe, such as breaking a limb, losing a job, or flunking a test.
CUMULATIVE: Events that pile up, one right after the other, so that there is no resolution before the next one occur. A dangerous situation in most cases.	ISOLATED: An event that occurs alone, at least with no other events apparent at that time. It can be pinpointed easily.

Resources (B factor).

Boss (1988) defined *existing resources* as “economic, psychological, and physical assets upon which members can draw in response to a single stressor event” (p. 68). Examples of *resources* which may be at one’s disposal include financial security, health, cognitive ability, job skills, social support, and relationship skills. An individual may have existing resources available to them or they may be expanded to bring new resources to the situation. It is important to note, however, that having resources does not mean that an individual will use them or that if they use them, they will be used in a positive way.

Family definition: Perception of stressor (C factor).

When a stressor event occurs, the individual enters the perception/appraisal phase. Hill et al. (1949) and McCubbin and Patterson (1983) defined perception of the stressor as the meaning a family assigns to a crisis event and all of the circumstances that lead to the crisis. The original ABCX model illustrates only one phase of perception/appraisal. Lazarus (1984) contributes to this model by suggesting that these perceptions consist of primary appraisal of the stressor. Primary appraisal is normally followed by secondary appraisal or existing and expanded resources to manage the stressor. *Primary appraisal* is a process in which the individual evaluates the work/family stressor. *Secondary appraisal* is the process of evaluating the available resources.

While there are societal definitions of the severity of life events and transitions, the C factor is a subjective evaluation of the stressor. It can be driven by the values and past

experiences that the family has had in handling crises. These can vary substantially from one individual to another and/or family-to-family. One family may view life changes and transitions as an opportunity while another may view it as an uncontrollable stressor leading to a crisis.

Family crisis: Demand for change (X factor) (Outcome).

The family crisis, or *x factor* in the ABCX Model (see Figure 1.2), has been defined as “disruptiveness, disorganization, or incapacitation in the family social system.” (McCubbin & Patterson, 1983) (p. 11). Boss (1988) defined a *family crisis* as

- (a) *a disturbance in the equilibrium that is so overwhelming,*
- (b) *pressure that is so severe, or*
- (c) *a change that is so acute that the family system is blocked, immobilized, and incapacitated* (p. 14).

While stress is characterized by a demand-resource imbalance, crises occur when an individual or their family are constantly pressured to change their interaction structure and patterns and they are unable to regain stability.

Figure 1.2 illustrates this crisis as an outcome which can be behavioral, psychological, or medical consequences or *outcomes* resulting from stress for an individual (Quick et al., 2003a). There can also be professional consequences or *outcomes* of stress such as lower levels of work engagement and job satisfaction and higher levels of absenteeism and intent to turnover (McCubbin & Patterson, 1983).

Applicability of ABCX Stress Model to WFC/FWC in Current Study

As explained in the previous section, the ABCX model (Figure 1.2) gives work-family researchers a framework for understanding the process of stress for individuals. In the context of

the present study, the ABCX stress model has been integrated into the current study (see figure 1.1).

The ABCX stress model (Figure 1.2) suggests that there are individual and organizational stressors that Extension professionals encounter. As previously discussed, these stressors may be (a) environmental demands; (b) physical task demands; (c) role-related demands; (d) interpersonal demands; and (e) resource-related demands. From a work-family conflict perspective, stressors or demands may be encountered at work that affect the Extension professional's life away from the workplace. Examples include working long hours or time away from home, conflicts with colleagues or supervisors, or physically demanding work that leaves little energy for the Extension worker once they are at home.

From a family-work conflict perspective, stressors or demands may be encountered away from the workplace that affect the Extension professional's work. Examples include care-giving demands such as child care and elder care issues or a single mother's lack of financial resources.

The appraisal processes apply to this study as conceptualized in the C factor of the ABCX model. When an Extension professional encounters a stressor, they evaluate the stressor and the available resources. The existing resources that are examined in this study are work and non-work social support systems. Work social support for Extension professionals can include organizational, supervisor, and colleague support. This support can be in the form of work-family friendly policies, supervisor, and/or colleague's assisting the employee with a work or family related stressor. Non-work social support for Extension professionals can include

spousal/partner or other family member social support. This can be in the form of assistance with care-giving demands from a spouse or financial assistance from another family member, for example.

Hypothetically, once an Extension professional has accessed social support resources from work or non-work areas, engagement outcomes will result. If social support resources are available to the employee, the outcome will tend to be positive. For example, an Extension professional who feels supported by their work environment (organization, supervisor, and colleagues) and non-work environment (spouse/partner and other family members) will tend to have more positive engagement outcomes. If social support resources are not available, the outcome will tend to be negative.

In summary, the ABCX stress model provides a theoretical view of the focus of this study.

Assumptions

The researcher is aware of the following assumptions:

1. Participants can read the questionnaire (Appendix C). Since the population being sampled should have at a minimum, an undergraduate degree, it is assumed that participants will be able to read and understand the questionnaire.
2. Participants will understand the concept of “family” as being applicable to both single and married participants. “Family” for single individuals can be thought of as immediate family members other than a spouse or partner.

3. Job titles and responsibilities may vary across regions and states of the country.
4. The measures used in the questionnaire are self-reported and are by definition flawed in that perceptions can be biased or easily influenced. However, employee perceptions can produce vital information about the extent to which employees view work-family/family-work conflict as predictors of work engagement and health outcomes.

Dissertation Organization

This dissertation is organized into five chapters. Chapter 1 introduces the theoretical justification for studying work-family conflict and family-work conflict as predictors for employee work engagement outcomes as mediated by work and non-work support.

Chapter 2 gives a review of the literature and refers to a conceptual model of the overall research question. This chapter is divided into nine major sections: (1) antecedent – work-family conflict (WFC); (2) outcome – work engagement (ENGAGE); (3) work-based and non-work based social support mediators; (4) the relationship between work-family conflict (WFC) and work engagement (ENGAGE) outcome; (5) the relationship between work-family conflict (WFC) and work-based and non-work based social support mediators; (6) work-based and non-work based mediators and work engagement (ENGAGE) outcome; and (7) summary of the hypotheses; (8) objectives/purpose of the study; and (9) anticipated contributions.

Chapter 3 provides the research methods that were used for this study including the hypotheses, structural equation modeling, research design, sample selection, sample characteristics, procedures, and the variable definitions.

Chapter 4 provides the results of the study including the descriptive characteristics, confirmatory factor analysis, and structural equation modeling.

Chapter 5 provides the discussion of the study including the limitations as well as implications for research and practice.

Summary

To summarize, this research will draw upon stress theory to explore the effects of the work/family conflict and family/work conflict upon the work engagement outcomes of Extension professionals. This study will contribute to the body of literature in two ways: 1) by examining a population which has been understudied in the work/family literature and 2) by increasing the body of literature examining the work/family relationship with employee engagement outcomes. The implications for organizational policies and culture will be generated to provide guidance to Extension administrators in their strategic management of their organizations.

CHAPTER 2

REVIEW OF LITERATURE

Following the conceptual model in Figure 1.1, the review of literature is being presented in this subsequent order: (1) antecedent – work-family conflict (WFC); (2) outcome – work engagement (ENGAGE); (3) work-based and non-work based social support mediators; (4) the relationship between work-family conflict (WFC) and work engagement (ENGAGE) outcome; (5) the relationship between work-family conflict (WFC) and work-based and non-work based social support mediators; (6) work-based and non-work based mediators and work engagement (ENGAGE) outcome; (7) summary of the hypotheses; (8) objectives/purpose of the study; (9) anticipated contributions.. In the discussion which follows an overview will be discussed for each construct as an antecedent, outcome, and mediator. A brief overview of the definition, history, and dimensions of each construct will also be given.

Figure 1.1 presents a conceptual model incorporating work-family conflict (WFC) and work engagement (ENGAGE) outcomes. As the model suggests, work-family conflict (WFC) can be bi-directional in that work can create conflict for family and family can create conflict for work. This model suggests that the work engagement (ENGAGE) outcomes and work-family conflict (WFC) relationships may be mediated by social work support (supervisor and colleague) and non-work support (spousal/partner and family support).

Antecedent – Work-family Conflict

The work-family conflict construct has been one of the most widely researched constructs in the empirical work-family literature (e.g. Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Bianchi & Milkie, 2011).

Work-family Conflict - Definition and History

Work-family conflict/family-work conflict has been studied as an antecedent, outcome, mediator and moderator (e.g. Byron, 2005; Carlson & Perrewew, 1999; Eby et al., 2005; Karasek, 1979). The following discussion will focus upon work-family conflict/family-work conflict as an antecedent. Additionally, there will be a brief discussion of work-family conflict/family-work conflict as well as an outcome, mediator and moderator.

Also known as work-family interference, work-family conflict is a bi-directional type of inter-role conflict that arises when there are conflicting or incompatible demands (stressors) from work and family roles. In other words, conflict arises when participation in a work (or family) role makes it difficult to participate in the other role (Greenhaus & Beutell, 1985). Consistent with stress theory, work-family conflict, as an inter-role conflict, is a type of stressor or demand which every individual experiences. It is widely acknowledged among researchers that this inter-role conflict is due to time-based, behavior-based, and strain-based conflicts between work and family (e.g. Eby et al., 2005; Greenhaus & Beutell, 1985; Voydanoff, 2005).

For the past 40 years work-family conflict has been the predominant research construct in the work-family field. Many historians credit initial interest to Kahn, et al. (1964) who identified

work-family conflict as a type of inter-role conflict. Yet, nearly all their research focused upon conflict within the work role and ignored the dynamics fundamental to inter-role conflict. Kanter (1977) was the first to challenge the myth that work and family are separate spheres. The view that work and family influence one another has developed into what is referred to as “spillover theory”: when work influences family and family influences work. In the 1980s, the phrase “work-family conflict” became well known during a time when a sharp increase in the women’s labor force was being experienced. Greenhaus and Beutell (1985) contributed one of the earliest theoretical views of the construct by suggesting that work-family conflict (WFC) consists of time-based, strain-based, and behavior-based demands. Frone (1992) demonstrated the importance of differentiating between the direction of the conflict (work-family conflict or family-work conflict) and that when an individual’s role in one domain interferes with a role in another domain the individual has difficulty meeting the demands in the receiving role. More recently, researchers have proposed a source attribution perspective, arguing that when one encounters work-family conflict, an individual may experience decreased performance in the receiving domain, but they may psychologically blame the domain that is the source of the conflict. In a meta-analysis of 153 studies, Shockley and Singla (1979) found work-family conflict was more strongly related to job satisfaction than family satisfaction and family-work conflict was more strongly related to family satisfaction. After discussing the definition and history of the work-family conflict constructs, it is important to also discuss their dimensions.

Dimensions of Work-family Conflict

Work-family conflict originally began as a unidimensional construct. That is, conflict can arise from work roles interfering with family or family roles interfering with work as part of one dimension (Mesmer-Magnus & Viswesvaran, 2005). This is sometimes expressed as work interfering with family and family interfering with work (e.g. Byron, 2005; Frone et al., 1992; Frone, Yardley, & Markel, 1997; Greenhaus & Beutell, 1985; O'Driscoll, Ilgen, & Hildreth, 1992).

Research has begun to examine the different forms of work-family conflict and family-work conflict. Researchers now acknowledge that the dimensions of directionality are distinct, reciprocal constructs that have independent antecedents and outcomes. Although some overlap between the two conflicts has been found, two separate meta-analyses consisting of 85 samples found that enough unique variance exists between the two constructs to demonstrate discriminant validity. Researchers are now encouraged to test work-family conflict and family-work conflict as separate, distinct measures (e.g. Byron, 2005; Frone et al., 1992; Frone et al., 1997; Mesmer-Magnus & Viswesvaran, 2005). According to Greenhaus and Beutell (1985), work-family conflict (WFC) and family-work conflict (FWC) are comprised of time -based, strain-based, and behavior-based demands.

Time-based demands. Time-based demands occur when time that is set aside for one role creates difficulty in participating in another role. Time-based conflict can be present in two forms: (1) time demands associated with one role can make it physically impossible to meet

expectations in another role; and (2) time demands can produce a fixation on one role while physically attempting to meet the demands required in another role. Time-based demands can occur in the number of hours worked, shift work, or absence from work to deal with a family situation. For example, night meetings make it difficult for parents to help children with their homework. Similarly, taking a day from work to assist with an elder care situation makes it difficult for an employee to meet a deadline at work (Greenhaus & Beutell, 1985).

From a work perspective, direct positive relationships have been found between work-family conflict and number of hours worked per week (Burke, 1988; Greenhaus & Beutell, 1985). Number of hours commuting, number of hours and frequency of overtime, lack of flexible work schedules, and shift irregularity have had a direct positive relationship to work-family conflict and family-work conflict (e.g. Kinnunen, Geurts, & Mauno, 2004; Pleck, 1977; Voydanoff, 2005).

From a family perspective, marital and parental status can affect one's degree of time-based demands of work-family conflict. Positive relationships have been found between work-family conflict and married individuals as compared to unmarried individuals (Herman & Gyllstrom, 1977). Generally, married individuals will have more time-based demands than those who are unmarried. Similar findings have been found for parents compared to those who are not parents. This is especially true for parents with younger children who tend to experience more time-based demands leading to increased work-family conflict compared to parents with older children (e.g. Greenhaus & Beutell, 1985; Greenhaus & Kopelman, 1981; Pleck, 1977). Also,

spousal employment patterns can affect work-family conflict. Generally speaking, a husband's level of work-family conflict does not seem to be affected by his wife's employment; however, husbands whose wives are in a professional/managerial career tend to experience more work-family conflict due to longer working hours (e.g. Eby et al., 2005; Greenhaus & Kopelman, 1981; Parasuraman, Greenhaus, & Granrose, 1992). Women tend to experience greater levels of time-based demands than men (Carlson et al., 2000). From a generational perspective, time-based demands for a Gen-Xer caring for young children or a Baby Boomer caring for an elderly parent can result in more intense work-family conflict (Dilsworth & Kingsbury, 2005).

Strain-based demands. Strain-based demands occur when strains in one role infringe upon and impede other roles. For example, an employee concerned about a child's illness may have difficulty concentrating on their job. Similarly, an employee who works long hours to meet a deadline may be ill-tempered and too exhausted to meet his/her family's needs.

From a work perspective, ambiguity or conflict in the work role have been positively related to work-family conflict. Work-family conflict is also related to lack of work support (e.g. Aryee et al., 1999; Cohen, Frank, Doyle, & Rabin, 1998; Greenhaus & Beutell, 1985; Halpern, 2005; Kelloway et al., 1999; Lawrence et al., 2007; Parasuraman et al., 1992; Tatum, 2001). Work related stressors such as pace of changes in work environment, lack of and/or inadequate communication, job insecurity, and concentration required at work have also been linked to work-family conflict (Burke, Weir, & Duwors, 1980; Voydanoff, 2005).

From a family perspective, demands from a spouse, child, or relative can create conflict in the form of higher levels of work-family conflict and family-work conflict. Stress experienced at work can affect marital satisfaction and functioning (Kelloway et al., 1999). Women whose career orientation is different from their husband's tend to have greater levels of work-family conflict. Also, husband-wife disagreement about family roles can create more intense work-family conflict (Greenhaus & Beutell, 1985). Women tend to experience greater strain-based family-work conflict than men (Carlson et al., 2000; Voydanoff, 2005). Spouses who are supportive serve as a buffer to work-family conflict/family-work conflict.

Behavior-based demands. Behavior-based demands occur when patterns of behavior in one role are incompatible with the expected behavior in another role. Carlson et al. (2000) found empirical support for behavior-based conflict. Edwards and Rothbard (2000) noted that behavior-based demands do not necessarily include conflicting demands. It simply means that behavior that is developed in either role can interfere with performance in another role. For example, while using confrontational approaches to address work-related problems may be effective, they may be ineffective when applying them to family-related problems. The stereotype of a manager emphasizes independence, aggressiveness, and objectivity. Family members, in contrast, expect someone who is nurturing, warm, and emotional at home. If the individual is unable to change their behavior to what is expected between roles, conflict may arise (Greenhaus & Beutell, 1985). Another occupational example is that of teachers. Teachers develop patterns of communication with their students that directly have an effect upon how they interact with their

children and spouse (Ispa, Gray, & Thornburg, 1984). Behavior-based demands have not been as recognized in the literature as time and strain-based demands (Daalen, 2006; Greenhaus, 1994; Carlson, 2000).

Work-family Conflict Research with Extension Professionals

One of the rationales for conducting this study is the lack of work-family conflict research with the Extension population. A review of the literature found only two studies using Extension professionals to examine work-family conflict. St. Pierre (1984) found that Pennsylvania Extension professionals perceived their work to affect their family life negatively. Martin (2001) found significant differences between Extension professionals' work satisfaction, marital satisfaction, parental-child relational quality, marital conflict, and effect of job on family life satisfaction by their area of job responsibility and job title. Past reports from exit interviews of Extension employees determined many of the reasons for leaving the organization included working excessive hours, the job demands' effect on their family, and a shortage of resources for work/family balance (Kutilek, 2000; Clark, 1998; Rousan, 1994 as cited by Kutilek, p.5, 2006). Some Extension research has found differences in life satisfaction, organizational commitment, job satisfaction, and intent to turnover between Extension employees at different education and assignment levels within the organization (e.g. Kutilek, n.d.; Kutilek et al., 2002; Lepley, 2004; Martin, 2001; Martin & Morris, 2005; St. Pierre, 1984). Work-family or work-life policies could assist Extension organizations in addressing these issues.

Work-family conflict will now be discussed as an antecedent, as this is how it is used in this study. Following this, there will be a brief discussion of work-family conflict as an outcome, mediating and moderating variable.

Work-family Conflict as an Antecedent

In this study work-family conflict (WFC) is assessed as an antecedent to work engagement (ENGAGE) outcomes. In recent meta-analyses, the effects of work-family conflict and family-work conflict and their negative consequences for outcomes such as job satisfaction, absenteeism, and intent to turnover have highlighted the impending negative effects for employees and organizations.

Work-family conflict has been found to decrease job satisfaction, life satisfaction (Kossek & Ozeki, 1998), work performance, and organizational commitment, while increasing job stressors and depression (Bedeian, Burke, & Moffett, 1988; Frone et al., 1992), burnout, absenteeism, and intent to turnover (e.g. Adams, King, & King, 1996; Allen et al., 2000; Byron, 2005; Frone et al., 1997; Mesmer-Magnus & Viswesvaran, 2005).

Allen, Herst, Bruck, and Sutton (2000) conducted a meta-analysis of over 130 empirical studies from 1977 to 1998 and found work-family conflict to be an antecedent for three categories of outcomes including: work-related outcomes, non-work related outcomes, and stress-related outcomes. Work-related outcomes of work-family conflict include job satisfaction, intent to turnover, organizational commitment, absenteeism, job satisfaction, career satisfaction, and career success. Non-work related outcomes of work-family conflict include life satisfaction,

marital satisfaction, family satisfaction, family performance, and leisure satisfaction. Stress related outcomes of work-family conflict include psychological strain, physical symptoms, depression, substance abuse, burnout, work-related stress, and family-related stress.

Kossek and Ozeki's meta-analysis (1998) found that family-work conflict, rather than work-family conflict, was negatively related to work performance and attitudes. Both work-family conflict and family-work conflict tended to be associated with higher turnover intentions, absenteeism, and less organizational commitment. The level of job-life satisfaction as a result of work-family conflict tended to be stronger for women than men. In a review of 190 empirical studies dating from 1980 to 2002, Eby, Casper, Lockwood, Bordeaux and Brinley (2005) found seven studies that explored work-family conflict as an antecedent to lower job satisfaction. Bruck (2002) found that both behavior-based work-family conflict and behavior-based family-work conflict significantly predicted global and composite job satisfaction better than strain or time-based work-family conflict and family-work conflict.

Surprisingly, positive relationships between work-family conflict and employee engagement have been recently found. Halbesleben, Harvey, and Bolino (2009) found a significant and positive relationship between strain, behavior, and time-based work-family conflict and engagement. They suggested the possibility that employees with higher levels of conscientious (i.e. engagement) tend to have less work-family conflict. They attribute this unexpected finding to the conservation of resources theory which is that people seek to obtain and protect resources. Resources include anything that is of personal value to an individual and







can include objects, energy, or personal characteristics. Hence, while the past literature has typically demonstrated a negative relationship between work-family conflict and engagement, there is an emerging avenue for examining the positive relationship between these two constructs.

It is also important to note that much of the past research has focused upon work-family conflict as an outcome, mediator, or moderator. A brief discussion follows for each one.

Work-family Conflict as an Outcome, Mediator and Moderator

Work-family conflict has also been studied as an outcome, mediator, and moderator. Historically, work-family conflict has been studied to a greater extent as an outcome variable rather than an antecedent. Greenhaus and Beutell (1985) were the first to suggest time-based, strain-based, and behavior-based incompatibilities to be key antecedents to work-family conflict. In a comprehensive meta-analysis, Eby, et al. (2005) reviewed 190 work-family studies published from 1980 to 2002 and catalogued 966 predictor variables of work-family conflict.

Major themes and percentages from those studies included:

 Family characteristics	12.5%
 Background characteristics	11.6%
 Work attitudes	11.2%
 Job attributes	09.9%
 Stress	08.3%
 Organizational characteristics	07.3%

These meta-themes of antecedents of work-family conflict can be classified into three major categories: (1) work domain variables; (2) non-work domain variables; and (3) individual

and demographic variables. Similarly, a meta-analysis conducted by Allen, Herst, Bruck and Sutton (2000) found three major themes out of 67 quantitative studies: work, non-work and stress. Byron's (2005) meta-analytic review of over sixty studies demonstrated that work related antecedents relate more to work-related interference than non-work interference. Conversely, non-work antecedents tend to relate more with family interference with work than work interference with family. For example, the number of hours spent worked, job involvement, job stress, and work support were more positively related to work-family conflict than family-work conflict. Likewise, the number of hours spent on non-work (household work, family activities, family support, and family stress were key antecedents for family-work conflict. Demographic variables tend to be weak predictors of work-family conflict/family-work conflict; however, Byron's (2005) review found indirect effects of between-study variances in the number of women and parents in the sample. Personality characteristics have emerged from recent empirical studies as a possible antecedent of work-family conflict/family-work conflict. Kahn et al. (1964) envisioned that the susceptibility of employees' role conflict of workers would be partially a result of their personality characteristics. Recent meta analyses support this (Allen et al., 2011).

The empirical findings linking work-family conflict as a mediator between stressful job conditions and health and quality of life outcomes has varied. Several studies have suggested work-family conflict (WFC) as a mediator between stress at the workplace and health and quality of life (e.g. Frone et al., 1997; Karasek, 1979; Kossek & Ozeki, 1998). Geurts et al. (1979) found

a full mediation model between workload and physical health complaints and a partial mediation model between workload and work-related negative affect. However, these models have been disputed by other research findings of weak relationships between number of hours of work and work-family conflict (Hobfoll, 1989) and between work-family conflict and family distress (Frone et al., 1992). Conversely, in a recent meta-analysis Michel, Mitchelson, Pichler, and Cullen (2010) found lack of support for work-family conflict and family-work conflict as a mediator between stressors and job satisfaction, life satisfaction, or family satisfaction.

A review of the literature found no studies examining work-family conflict as a moderator.

Outcome - Engagement

Employee Work Engagement - Definition and History

There are several indicators of productivity which could be examined in this current study. Clear linkages have been found in the empirical literature between work-family conflict and outcomes such as organizational commitment, job satisfaction, and intent to turnover. Work engagement is a more recent phenomenon being explored by researchers. A recent literature search found 227 scientific publications have been produced with either “work engagement” or “employee engagement” in the title (Hooper et al., 2008). The body of literature examining work engagement within the context, however, is smaller (Halbesleben, 2009; Montgomery, Peeters, Schaufeli, & Den Ouden, 2003). Although Hodge (2009) examined work engagement using the

Extension population, work-family conflict was not considered in the study. This study will address this gap.

Kahn (1992) was the first to suggest that engagement is a behavior in which employees bring their personal selves to their work role performances while using their personal energy, emotional connection, and persistence in performing tasks. Schaufeli (2008) noted that engagement is essentially a combination of psychological concepts: affective organizational commitment, continuance commitment, and extra-role behavior. Bakkar et al. (2008) noted that research on burnout generated an interest in work engagement. Employees suffering from burnout view their work as stressful and demanding while engaged employees see their work as challenging and have a sense of energy and motivation with their work (e.g. Maslach & Leiter, 1997; Roma', Schaufeli, Bakker, & Lloret, 2006; Schaufeli & Bakker, 2003).

Engagement suggests a continual and all-encompassing affective-cognitive state and “is not focused on any particular object, event, individual, or behavior.” In other words, engagement describes the extent to which an employee is involved with, committed to, and has a zeal for their work (Bakker & Demerouti, 2008a).

The National Study of the Changing Workforce (NSCW) found that greater workplace flexibility created more work engagement and commitment among non-managerial and non-professionals (Harter et al., 2002b). Engaged workers perform better than non-engaged workers. Engaged workers tend to have more positive emotions, have better physical and psychological health, have more personal and work support available, and have the ability to transmit their

work engagement to others. In a study of 50 global organizations Towers and Perrin (2008) found that organizations whose employees have higher than average work engagement levels had higher 12 month change in net income (14% versus 4%) and higher twelve month growth in stock earnings (28% versus 11%) than organizations whose employees have lower than average work engagement levels.

Work engagement is often cited in the literature as the exact opposite of the job burnout construct; however, consensus has not been reached by researchers. Another viewpoint is that employee engagement is a distinct, individual concept and is negatively related to burnout. Leiter and Maslach (2004) and Roma' et al. (2006) proposed that burnout and engagement are bipolar dimensions. Schaufeli and Bakkar (2004) found however, that burnout is not the polar opposite of work engagement but rather a separate construct that is correlated with it.

Dimensions of Work Engagement

Schaufeli et al. (2002) defined work engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (p. 74). They noted that *vigor* is “characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties” (p. 74). Vigor is considered a positive affective work characteristic and the conceptual opposite of exhaustion in the burnout construct (Shirom, 2011). An employee who almost always exhibits a very positive attitude and is very determined in finding solutions is an example of someone having a high level of vigor.

Schaufeli et al. (2002) noted that *dedication* is “characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge” (p. 74). Dedication is the conceptual opposite of cynicism in the burnout construct.

Schaufeli et al. (2002) noted that *absorption* is “characterized by being fully concentrated and deeply engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work” (p. 75). Csikszentmihalyi (1990) described *absorption* as a “flow”, as it represents the degree to which employees are cognitively absorbed in a persistent way in their work. Absorption is not considered the opposite of personal efficacy in the burnout construct since exhaustion and cynicism represent the core of the burnout construct.

Vigor and *dedication* are considered the core dimensions of engagement, while absorption acts as a consequence of engagement (Bakker et al., 2008).

Work engagement has been researched not only as an outcome variable, but also an antecedent, mediator, and moderator. Brief discussions of each will now follow.

Work engagement as an outcome. Research has found work engagement to be an outcome of primarily job resources (e.g. physical, social, and organizational functional characteristics of the job needed to achieve work, reduce demands, and increase personal growth). Job resources that predict work engagement vary from organization to organization. Vital resources include performance feedback, autonomy, skill variety, justice, and social support from colleagues and supervisors. Although the relationship is not as strong as job resources, personal resources (e.g. positive perceptions of oneself, hope, self-efficacy, and the

ability to perceive and control emotions) can also predict work engagement. When employees have the needed job resources and personal resources they will have more confidence, be more engaged, and perform better than on days when they do not have sufficient resources (e.g. Bakker et al., 2008; Hooper et al., 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009).

A meta-analysis by Christian and Slaughter (2007) found that although job demands were not significantly related to work engagement, demands that require physical energy and effort significantly negatively affected the vigor and dedication components of work engagement. On the other hand, cognitive demands requiring mental effort had positive effects for vigor and dedication.

A limited number of studies have examined work engagement as an outcome of personality traits. Extravert individuals who are low in neuroticism, irritability and impatience tend to be more engaged (e.g. Hallberg, Johansson, & Schaufeli, 2007; Langelan, Bakker, Van Doornen, & Schaufeli, 2006).

Richman, Civian, Shannon, Hill and Brennan (2008) found that work engagement was predicted by work flexibility and work-life policies. Schaufeli and Bakkar (2004) found that employees who work too much and too many hours have low engagement.

An emerging concept in the engagement literature is the importance of leadership styles of supervisors in fostering work engagement. Bass (2005) proposed three leadership styles that varied from giving an employee individual support (transformational style) to a comparative exchange between the supervisor and employee (transactional style) to no interest in the

employee at any level (*laissez-faire* style). Baker, Albrecht, and Leiter (2011a) note that transformational leadership style is the only style which would significantly contribute to an employee's work engagement because it is the only style that is motivational and inspiring to the employee.

In a similar vein, there has been some empirical evidence suggesting that an employee's level of engagement can be influenced by the affective state of their colleagues or leaders. In a study of 2,229 police officers working in 85 teams, Bakker, van Emmerik, and Euwema (2006) found a relationship between work engagement at the team level and the individual team members' level. Sy, Cote, and Saavedra (2005) found that when a leaders' mood was positive (rather than negative) individual team members' moods were positive. The implication is that employees will tend to be more engaged and productive when their colleagues are in a positive affective state or good mood.

While almost all research has focused upon work engagement as an outcome there are volumes of research examining it as an antecedent. Work engagement as a mediator or moderator is, however, somewhat limited.

Work engagement as an antecedent, mediator, and moderator. Research has consistently supported the link between work engagement and job performance. A 2002 meta-analysis of 7,939 business units in 36 companies found significant positive relationships between employee satisfaction–work engagement and the business-unit outcomes of customer satisfaction, productivity, profit, employee turnover, and accidents. Business units in the top 25

percent of work engagement levels averaged \$80,000 to \$120,000 more in monthly revenue or sales (Harter et al., 2002b). In a study using Spanish restaurant and hotel personnel, Salanova, Agut and Peiro' (2005) found support for a full mediation model where organizational resources and work engagement predicted service climate which predicted employee performance and ultimately customer loyalty. In a diary study of fast-food employees in Greece, Xanthopolou, Bakker, Demerouti, and Schaufeli (2009) found that daily engagement levels predicted daily financial returns. The financial outcomes of work engagement or disengagement highlight the business case for examining this construct in more depth, particularly from a work-family conflict/family-work conflict perspective.

Meta-analyses have found that work engagement can also serve as a predictor for employee retention, employee productivity, and customer satisfaction (e.g. De Langea, De Witte, & Notelaers, 2008; Harter et al., 2003), health, and self-efficacy (Schaufeli & Salanova, 2007).

Empirical research has found evidence of engagement in a mediating role between job resources and positive motivational outcomes (e.g. lower turnover intentions) (W. Schaufeli & A. Bakker, 2004), organizational commitment, (Hakanen, Bakker, & Schaufeli, 2006; Llorens et al., 2006) and personal initiative, and work-unit innovativeness, (e.g. Calvert, 2010; Hakanena, Schaufelib, & Ahola, 2008; Weigl et al., 2010).

An exhaustive review of literature found only one study examining work engagement as a moderator. In a large-scale study of a hospital setting Leiter and Harvie (1998) reported work

engagement moderating effects for the relationship between supportive supervision, confidence in managers, and effective communication, and change acceptance.

Social Support Mediators

Definition and History of Social Support

Social support assists individuals in dealing with stress and reducing its negative psychological and physiological effects. Social support became of scientific interest following the work of Cassell (1976) and Cobb (1976) who suggested that social support plays a crucial role in one's health and well-being by serving as a "buffer" against the effects of stress. There have been inconsistencies in the conceptualization and operational definitions of social support resources (Schwarzer & Leppin, 1991; Winemiller, Mitchell, Sutcli, & Cline, 1993). Cobb (1976) defined social support as one's belief that they are loved, valued and that others are concerned about their well-being. Viswesvaran, Sanchez and Fisher (1999) contended that social support involves one's perception of having access to helping relationships of varying degrees that provide resources. Definitions are concentrated around a specific facet of social support that is connected to a set of support characteristics.

In the theoretical context of this study, social support is used as a type of coping mechanism. Social support has been proposed as a modifier of the stress response. It is closely related to Lazarus and Folkman's (1984) notion of cognitive appraisal and coping. Cognitive appraisal refers to individuals' viewing the same demands and stressors differently based on their cognitive appraisal. One individual may see a demand or stressor as an opportunity while another

views it as a threat. When this occurs, individuals employ coping mechanisms to manage the stress (Quick et al., 2003b). Social support is a coping mechanism in which resources available to individuals can intervene in the stress and coping process. Social support assists individuals in buffering stress and its potential negative physiological and psychological consequences (Lawrence et al., 2007). When an individual perceives a situation to be stressful, their social support resources can help ease the negative effects.

Types of Support

There are various labels and levels of social support cited in the literature. According to House (1981) there are at least four forms of social support: (1) emotional; (2) appraisal; (3) informational; and (4) instrumental.

Emotional support, the most common form of social support, is characterized by empathy, listening, caring, love and trust and typically comes from family and close friends. *Appraisal support*, which typically comes from family, friends, co-workers, and other community sources, consists of affirmation, feedback and social comparison that the individual can use for self-evaluation. *Informational support* is characterized by advice or suggestions which assists an individual in responding to demands. *Instrumental support* consists of tangible resources that assist the individual such as money, food, materials, and needed services and typically comes from friends, colleagues, and neighbors.

Sources of Support

Research has supported the notion that there are three distinct sources of social support: (1) supervisor (e.g. Harter et al., 2003; Llorens et al., 2006; NG & Sorensen, 2008); (2) coworkers; (e.g. "Fact Sheet #28: The Family and Medical Leave Act of 1993," 2006; Harter et al., 2003; Kossek, Pichler, Bodner, & Hammer, 2010; Llorens et al., 2006; NG & Sorensen, 2008) and (3) non-work sources, such as family and/or friends (e.g. Aryee et al., 1999; Harter et al., 2003; Lawrence et al., 2007; Llorens et al., 2006).

In the context of work-family/family-work conflict, an individual can have social *work support* resources in the form of their organization, supervisor and/or colleague. Empirical research has consistently proven that social support from colleagues and particularly from supervisors predicts work outcomes such as job satisfaction, intent to turnover, employee retention, and work engagement (Bakker, 2008; Hakanena, 2008; Macey, 2008; Clark, 2001; Behson, 2005; NG, 2008). More recently, research has focused upon the impact that organizational social support in the form of formal work-family policies and work culture can have upon work outcomes (Benkhoff, 1997; Eisenberger, Huntington, & Hutchison, 1986; Jahn, Thompson, & Kopelman, 2003; Kossek, Pichler, et al., 2010; Rhoades & Eisenberger, 2002; Sahibzada, 2005).

According to Kossek (2005) work support consists of three main areas: formal work and family policies, job design/terms of employment, and informal support such as organizational culture. However, the findings have been mixed regarding formal work-family policies. Simply

having policies in place will not ensure that employees will access them. If there is a lack of social support from supervisors and colleagues, employees will feel pressure to not access these policies.

More recent studies have demonstrated that work-family specific support constructs mediate work-family conflict. In a recent meta-analysis drawing on 115 samples from 85 studies comprised of 72,507 employees Kossek, Pichler, Bodner, and Hammer (2011) found that the form or type of workplace social support is important when measuring work-family conflict. Therefore, work-family specific supervisor support and organizational support such as supervisor work-family support and colleague work-family support have a stronger effect on work-family conflict than general supervisor support and colleague support.

In the non-work environment, employees may have *non-work support* in the form of a spouse/partner, other family members, and/or friends. Throughout the literature, spousal support has been found to be a significant resource in mediating work-family conflict (Aryee et al., 1999; Blanton & Morris, 1999; Burke et al., 1980; Byron, 2005; Grzywacz et al., 2008). Higher levels of spousal support have been found to reduce inter-role conflict (Carlson & Perrewé, 1999) and lower levels have been negatively related to family-work conflict.

Social support benefits an individual in at least three ways: reducing strain, reducing the intensity of the stressor, and buffering the effects of the stressor on the strain. In other words, social support can help to alleviate both the event (stressor) and the feeling (strain) while also buffering the impact that the feeling had on the event (Viswesvaran et al., 1999).

Dimensions of Social Support

Lazarus and Folkman's (1984) psychosocial stress model posit that support resources can intercede in the stress and coping process during both primary appraisal and secondary appraisal. Primary appraisal exists when social support resources help determine the stressfulness of a situation. If an individual believes they can be supported by others they may redefine a harmful or threatening situation, thus precluding that situation from being appraised as stressful. If, however, the situation is appraised as stressful, then secondary appraisal occurs and a coping response is recognized which diminishes the stress. The coping response is formed according to the available support resources.

In the work-family conflict phenomenon social support has been used in different ways within a model. Some researchers consider social support as an antecedent to sources of stress that serves as a protector against a stressful experience (Cohen & Wills, 1985). In this method, social support is viewed as having a direct impact on work-family conflict. There has been some evidence providing support as an antecedent for work-family conflict (Fisher, 1985; Schaubroeck, Cotton, & Jennings, 1989).

Others view social support as a moderating variable, functioning as a buffer against the stressors and strains (e.g. Greenhaus & Parasuraman, 1986; Harter et al., 2003; Ray & Miller, 1994). Although the moderating model has been the most hypothesized model in research, little support has been found for social support as a moderator in the stressor-strain relationship (Parasuraman et al., 1992).

Finally, some researchers see social support as a mediating variable (e.g. Johnson, Thomas, & Riordan, 1994; Sheffield, Dobbie, & Carroll, 1994) so that when a stressful event occurs the support level increases which decreases the symptoms of stress. There have been some research findings of family support reducing the stress that individuals experience through work-family conflict (Staines & Pleck, 1983; Thomas & Ganster, 1995) .

It has also been argued that distinctions are needed between sources of support, particularly as it relates to work and family issues. Work support may exist through a supervisor and/or colleague. Non-work support may exist through a spouse, friend, or family member (e.g. Cohen & McKay, 1984; Cohen & Wills, 1985; House, 1981; Lawrence et al., 2007; NG & Sorensen, 2008; Terry, Rawle, & Callan, 1995). A discussion will now focus upon social support as a mediating variable followed by social support as an antecedent, outcome, and moderating variable.

Social support as a mediator. Social support was used as a mediating variable in this study. Social support has been used as a mediating variable in numerous other studies, including those examining work-family conflict. Frone, Yardley, and Markel (1997) found mediating effects for both work support and non-work support between work distress and work overload and work-family conflict and family-work conflict. A recent meta-analysis drawn from 115 samples and 72,507 employees determined that positive perceptions of general and work-family supervisor support levels mediates the work-family conflict relationship (Kossek, Pichler, et al., 2010).

Spousal support has been found to be a significant non-work resource in mediating work-family conflict (e.g. Aryee et al., 1999; Blanton & Morris, 1999; Burke et al., 1980; Byron, 2005; Grzywacz et al., 2008). High levels of spousal support have been found to reduce inter-role conflict (Carlson & Perrewe, 1999) and low levels to be negatively related to family-work conflict.

Social support as an antecedent, outcome, and moderator. Recent meta-analyses have demonstrated that social support is best viewed as an antecedent of work-family conflict (e.g. Byron, 2005; Ford, Heinen, & Langkamer, 2007; Michel et al., 2010). In a study comparing existing models of the relationship between social support and work-family conflict Carlson and Perrewe (1999) found that social support as an antecedent to stressors leading to work-family conflict provided the best fit. They asserted that employees with strong social support were less likely to perceive demands as stressors. Other researchers have found that co-workers specific support predicts depression and frustration (Beehr, Jex, Stacy, & Murray, 2000). Moreover, it has been found that work and family support were most related to same domain specific conflict (i.e. work support – work-family conflict and non-work support to family-work conflict) (Kossek, Pichler, et al., 2010; Michel et al., 2010). A recent meta-analysis found that supervisor work-family specific support was a better predictor of work-family conflict than general supervisor support (Kossek, Pichler, et al., 2010). No empirical research was found examining social support as an outcome or independent variable.

Evidence of moderating effects of social support has been less clear than evidence for main effects. Carlson and Perrewé (1999) contend that there has generally been a lack of research demonstrating moderating effects or mixed results. Some researchers contend that the buffer effect is not strong (Dormann & Zapf, 1999; Seiger & Wiese, 2009) while others have hypothesized that social support buffers the damaging effects of stressors by coping mechanisms (Cohen & Wills, 1985; Kobasa & Puccetti, 1983). A small number of studies have found moderating effects for social support in organizational stressors which affect job performance (Etzion, 1984; Kirmeyer & Dougherty, 1988). In a related study Boz, Martinez and Munduate (2009) discovered that high supervisor support levels moderate relationship conflicts and job satisfaction. In a study of 805 teachers, a moderating effect, in the form of colleague support, was found for those with high workload and turnover intention (Pomaki, DeLongis, Frey, Short, & Woehrle, 2010).

Dormann and Zapf (1999) asserted that a lack of longitudinal studies has resulted in the sparse empirical evidence of social support as a moderator for work-family conflict/family-work conflict.

Relationship of Antecedents and Outcomes

Work-family Conflict and Employee Work Engagement

Motivating employees to be engaged in their work is a common problem for organizations. It is further complicated with the spillover of non-work roles. Employees do not always leave their problems at home. This can result in a loss of productivity for organizations which translates to

fiscal losses. Empirical research on work engagement in the last ten years has begun to discover work-family conflict/family-work conflict as an antecedent of work engagement (e.g. Halbesleben et al., 2009; Montgomery et al., 2003; Peeters, Montgomery, Bakker, & Schaufeli, 2005; ten Brummelhuis, Bakker, & Euwema, 2010). Allen, Herst, Bruck, and Sutton's (2000) meta-analysis of studies published between 1980 and 1999 found that job satisfaction was the most widely studied work outcome of work-family conflict and that turnover intent produced the strongest findings. Richman, Civian, Shannon, Hill and Brennan (2008) found that perceived flexibility and supportive work-life policies were related to greater work engagement. Examining work engagement as an outcome of work-family conflict and family-work conflict can contribute to this area of research.

Hypothesis 1a: Work-Family conflict (WFC) is negatively related to work engagement outcomes.

Hypothesis 1b: Family-Work conflict (FWC) is negatively related to work engagement outcomes.

Relationship of Antecedents and Mediators

Prior to discussing the relationship between the antecedents and mediators in this study, attention will be given to the differences in *work based* and *non-work based* social support mediators.

Work-based Social Support Mediators

Previous research on social support has typically examined either work-based social support or non-work based social support or it has combined all forms of social support into a single construct rather than specifying the source of support (Adams et al., 1996).

Thomas and Ganster (1995) proposed that family-supportive work environments are composed of two chief elements: family-supportive policies and family-supportive supervisors. Supervisor support has been one of the most extensively researched forms of social support (e.g. Allen, 2001; Frone et al., 1992; Frye & Breugh, 2004; Goff, Mount, & Jamison, 1990; NG & Sorensen, 2008; Thomas & Ganster, 1995; Thompson, Beauvais, & Lyness, 1999). In a meta-analysis of 59 studies published between 1980 and 2005, NG and Sorensen (2008) found that not only were there significant correlations between supervisor support and job satisfaction, but the correlations were greater than for co-worker support and job satisfaction. Clearly, supervisors play a significant role in how employees perceive and experience their work environment.

Research on colleague work support has been gradually increasing in recent years (Carlson & Perrewe, 1999; NG & Sorensen, 2008). A recent meta-analysis of 25 samples found correlations between coworker support and work-family conflict and family-work conflict (Mesmer-Magnus & Viswesvaran, 2005). Another meta-analysis of 59 studies published since 1980 found that perceived colleague support can have a strong effect upon an employee's well-being. Galinsky, Bond, and Friedman (2005) found that parents have less work-family conflict when greater organizational and supervisor support was available. Theoretically and

operationally supervisor support and colleague support are often combined and treated as general social support. However, several studies have suggested that employees respond in diverse ways to differing forms of social support. Grouping different forms of support together may weaken our understanding of these constructs (Kossek, Pichler, et al., 2010; NG & Sorensen, 2008).

Non-work Based Social Support Mediators

Throughout the literature, spousal support has been found to be a significant non-work resource mediating work-family conflict (e.g. Aryee et al., 1999; Blanton & Morris, 1999; Burke et al., 1980; Byron, 2005; Grzywacz et al., 2008). High levels of spousal support have been found to reduce inter-role conflict (Carlson & Perrewe, 1999) and low levels to be positively related to family-work conflict. The majority of past research has used spousal support as a moderating variable (Aryee et al., 1999; Tatum, 2001). Terry, Rawle, and Callan (1995) found higher correlations for non-work support groups, which included spousal support, than work-support groups.

More recently, a handful of studies have examined the mediating effects of friends and other relatives upon work-family conflict. For example, van Daalen et al. (2006) found that supervisor and colleague support existed, but support from relatives and friends did not. Men typically report more support from their spouse than women while women report more support from friends and relatives than men (van Daalen et al., 2006).

There is a gap in the literature to understanding other non-work support mediators, particularly related to friends and other relatives in the work-family conflict context.

Additionally, very few studies simultaneously examine both the work based and non-work based social support systems. This study will contribute to the existing body of literature.

Work-family Conflict and Work-based Social Support Mediators

Numerous studies have highlighted the mediating effects of support from supervisors and colleagues in terms of work-family conflict (Kelloway, 1999; Parasuraman, 1992; Tatum, 2001; Lawrence, 2007). In a meta-analysis Bryon (2005) found that employees who work in a more supportive work environment or have a more supportive family tended to have less work-family conflict. In another meta-analysis, Viswesvaran, Sanchez, & Fisher (1999) found that social support (co-workers, supervisors, and family and friends) mitigated work strains and reduced the level of stressors. Galinsky, Bond, and Friedman (1996) found that parents who had greater organizational and supervisor support had better outcomes.

Empirical research has consistently demonstrated that social support from colleagues and supervisors is a predictor for work engagement. Employees tend to be more engaged in their work and are more productive when they feel supported by colleagues and in particular, supervisors (Bakker, 2008; Hakanena, 2008; Macey, 2008; Clark, 2001; Behson, 2005).

Recent research has shown that organizational support in the form of formal policies, and a supportive work culture can buffer the effects of work-family conflict. However, simply offering work-life programs does not always mean that employees will feel the organization is supportive of their needs (e.g. Galinsky et al., 1996; Jahn et al., 2003; Rhoades & Eisenberger, 2002).

Work-family Conflict and Non-work Based Social Support Mediators

Although the findings have not been as prolific, non-work social support such as spousal and family support have been found to be significant resources in mediating work-family conflict (Aryee et al., 1999; Blanton & Morris, 1999; Burke et al., 1980; Byron, 2005; Grzywacz et al., 2008). Spousal support tends to reduce inter-role conflict (Carlson & Perrewé, 1999) and be negatively related to family-work conflict. King, Mattimore, King, and Adams (1995) found empirical proof that family members can provide support for employees in their efforts to meet work demands by providing emotional sustenance. Exploratory multiple regression analyses suggested that level of emotional sustenance from family members may affect the job satisfaction of women.

Relationship of Mediators and Outcomes

Work Based Social Support and Work Engagement Outcomes

As indicated previously, work support can exist formally in the form of work-family program/policies. Several studies have indicated, however, that it is informal work support (organizational, managerial, colleague) which help to explain the variance in employee outcomes such as work engagement (e.g. Andreassi & Thompson, 2004; S. Behson, 2005; Blair-Loy & Wharton, 2002; Greenberger, Goldberg, Hamiil, O'Neil, & Payne, 1989; Sahibzada, 2005; Thompson et al., 1999; Xanthopoulou et al., 2009). Rothmann and Joubert (2007) found that job resources (organizational support in the form of supervisor, communication, role clarity, and work autonomy) predicted work engagement. One recent exception to this is the Richman,

Civian, Shannon, Hill and Brennan study (2008) which found support for perceived flexibility and formal work-life policies (organizational support) as a predictor for work engagement.

Numerous studies, including one meta-analysis, have shown that social support in the form of supervisor and colleague support is positively associated with work engagement (Bakker & Demerouti, 2008a; Halbesleben, 2009; Schaufeli & Salanova, 2007). For example Schaufeli and Bakker (2004) found a significant positive relationship in four samples of Dutch employees between supervisor support and work engagement. This study was replicated in a sample of over 2000 Finnish teachers and supervisor support was again positively related with work engagement (Hakanen et al., 2006).

Longitudinal studies have confirmed a positive relationship between supervisor support and work engagement. In a two-year study Mauno, Kinnunen and Ruokolainen (2007) found that job resources in the form of supervisor support was a better predictor for work engagement than job demands. In a 16 month study de Langea, Witte, and Notelaers (2008) found that low work engagement and low job resources (colleague and supervisor support) were predictive of turnover.

A current limitation in the research on work support and work engagement is the inconsistencies in definitions and measurements used for work support. For example, in the Rothmann and Joubert (2007) study supervisor support was included as part of the measurement for organizational support.

There are three sets of hypotheses pertaining to the work domain social support mediators in this study. One set tests the general supervisor support construct as a mediator, one set tests the family facilitative supervisor construct as a mediator, and one set tests the colleague support construct as a mediator.

Hypothesis 2a: Global supervisor support (GLOSUPSUP) partially mediates the relationship between work-family conflict (WFC) and employee work engagement (ENGAGE).

Hypothesis 2b: Global supervisor support (GLOSUPSUP) partially mediates the relationship between family-work conflict (FWC) and employee work engagement (ENGAGE).

Hypothesis 3a: Supervisor support for work, personal and family life (SUPSUP) partially mediates the relationship between work-family conflict (WFC) and employee work engagement (ENGAGE).

Hypothesis 3b: Supervisor support for personal, and family life (SUPSUP) partially mediates the relationship between family-work conflict (FWC) and employee work engagement (ENGAGE).

Hypothesis 4a: Colleague Support (COLSUP) partially mediates the relationship between work-family conflict (WFC) and employee work engagement (ENGAGE).

Hypothesis 4b: Colleague Support (COLSUP) partially mediates the relationship between family-work conflict (FWC) and employee work engagement (ENGAGE).

Non-work Based Social Support and Work Engagement Outcomes

A review of the literature resulted in no studies to date examining the relationship between non-work support systems such as spouse/partner or friends and work on work engagement. This study will serve to fill a gap in the body of knowledge on this aspect of the issue. There are two sets of hypotheses in this study pertaining to the non-work domain social support mediators. One set tests the family support construct as a mediator and one set test the support appraisal for stress – non-work as a mediator.

Hypothesis 5a: Family Support (FAMSUP) partially mediates the relationships between work-family conflict (WFC) and employee work engagement (ENGAGE).

Hypothesis 5b: Family Support (FAMSUP) partially mediates the relationships between family-work conflict (FWC) and employee work engagement (ENGAGE).

Hypothesis 6a: Non-Work Support (NWSUP) partially mediates the relationships between work family conflict (WFC) and employee work engagement (ENGAGE).

Hypothesis 6b: Non-Work Support (NWSUP) partially mediates the relationships between family-work conflict (FWC) and employee work engagement (ENGAGE).

Relationship of Antecedents, Mediators, and Outcomes

The previous sections of this chapter have demonstrated that there is a substantial amount of research for the separate components of this study's model: antecedents, mediators, and outcomes. What is deficient in the review of literature, however, are studies examining work engagement outcomes in relationship to the antecedents and mediators of this study.

In the context of the relationship of these specific variables, this is a groundbreaking study for three reasons: (1) the relationships of these specific variables have never been examined; (2) the Extension population, particularly such a large and representative one, has never been utilized integrating these variables; and (3) a national study does not exist examining these variables.

Objectives/Purpose of Study

The purpose of this research is to examine the relationship between work/family conflict and the work engagement among Extension employees. The objectives include:

1. Assess the current state of work/family conflict in the Extension organization across the United States.
2. Make recommendations to Extension administrators and personnel on how best to integrate work and family into the organization so that the organizational and work engagement is increased.

Anticipated Contributions (Theory, Research, Practice)

The work-family conflict research arena has been in existence in some form since the 1960s. It is anticipated that this study will support the overall findings of work-family conflict research to date. This study will make a significant contribution to the literature based on the population and sample size being used. To date, a national study of Extension professionals has not been conducted to examine the relationships of the variables presented. A handful of studies have examined some of the relevant variables in individual states across the United States. It is hoped

that this research will bring a call to action by Extension organizations across the country to an important issue which is affecting the profession in both direct and indirect ways. My vision is for a strategic move nationally and locally to create policies, support systems, and cultures which would help the organization and the employee to thrive.

Summary

Chapter 2 gave a review of past research of the constructs in this study (work-family conflict, family-work conflict, work-support, non-work support, and engagement. The relationships between these constructs were also discussed. This review establishes the six (6) hypotheses in the study, examining the relationships between the constructs (i.e. work-family conflict and work engagement and family-work conflict and work engagement) and the partial mediating relationship of support (work support mediating work-family conflict and work engagement; work support mediating family-work conflict and work engagement; non-work support mediating work-family conflict and work engagement; and non-work support mediating family-work conflict and work engagement). Chapter 3 will discuss the methodology of the study including the sample description, instrumentation, and data analysis procedures.

CHAPTER 3

METHODS

This chapter provides details of the methods used for testing the hypotheses presented in Chapter 2. First, the hypotheses will be reviewed and the theoretical model will be illustrated as a structural equation model. Second, the research design will be discussed followed by the sample selection and research procedures. Finally, the operational definitions and measurement scales will be discussed and the analysis procedures described.

The purpose of this study was to examine the relationship between work-family conflict and employee work engagement, as well as the mediating effects of work and non-work social support among Extension professionals across the United States.

Structural Equation Modeling

Structural equation modeling (Batt & Valcour, 2003) was used to test the theoretical model introduced in Chapter 1 and the hypotheses presented in Chapter 2. SEM has many advantages over other statistical analyses such as regression. SEM makes it possible to simultaneously test multiple constructs, accounts for measurement error in latent variables, and is idyllic for comparing theoretical models (e.g. Bollen, 1989; Byrne, 2010; Kline, 2011).

Research Design

This study used a quantitative cross-sectional survey research approach. A web-based questionnaire (Appendix B) consisting of 86 Likert-type scale items was used. Five narrative

questions were also used. The data for this qualitative approach will be used in a later study. The concluding portion of the questionnaire asked demographic questions such as age, current position, state, years in present position, and marital status.

A pre-test of the questionnaire was conducted to test understanding of the directions and the items, and the arrangement of the items on the computer screen. The pre-test was conducted in August 2007 with eight Extension professionals from Tennessee at various levels within the organization. The participants completed the questionnaire online without the researcher being present. They provided feedback concerning the individual items, directions, ease of completion, and flow. There were only two changes recommended. One was to ensure that the anchor points for each item appeared at the top of the computer screen to minimize scrolling. The other recommendation was to ensure that participants could not select more than one answer for items in which only one choice was to be selected.

Sample Selection

The population selected for this study was professionals who work for the U.S. Cooperative Extension Service. There are approximately 14,652 Extension professionals employed by 1862 and 1890 Land Grant Institutions as well as 1994 Tribal Colleges throughout the United States. The employees used in this sample work on the county, regional/district, and state levels. Extension professionals who had a percentage of academic appointments were excluded from the sample because their job responsibilities are different from the rest of the

sample. There were 5,100 participants invited to participate in this study. The final sample was 2,782 for a total response rate of 55%.

A stratified sampling method was employed so that a representative sample from each state could be obtained. When available, online Extension Directories from each state were used to draw the stratified random sample of employees from each state's institutions. The Extension system consists of four regions (Southern, Western, North East, and North Central). There were 46 states represented in the final sample. The four states not participating were Alaska, Nevada, Missouri, and Iowa.

Procedures

To reiterate, this web-based survey used for this study was piloted with a panel of experts for content and face validity. Again, recommendations given included ensuring that participants could easily answer questions on a single computer screen without the need to scroll and that participants could not select more than one answer for items in which only one answer should be chosen.

To gain support for the study in each state, all Extension Directors/Administrators of the 1862 and 1890 institutions in the United States were contacted via email to elicit their written support in the study. A follow up postal letter was sent to the directors who did respond (see Appendix D). A total of 46 directors responded and gave support of the study. They agreed to email a letter to the pre-selected employees who would be drawn for the sample once the questionnaire was ready for dissemination.

Extension administrators emailed the selected participants from their state a letter of support for the study. In addition, the Presidents of the National Extension Association of Family and Consumer Scientists (NEAFCS), the National Association of County Agricultural Agents (NACAA), and the National Association of Extension 4-H Agents (NAE4-HA) encouraged their respective members to participate in the study through their association's listserv (see Appendix D). Using a listserv created at The University of Tennessee, in September 2006 I emailed each selected participant with a brief introduction to the study along with the web address to access the survey (see Appendix E). If the participant was interested, the link directed them to a web page which included an introduction to the purpose of the study and an informed consent statement. The first page of the survey included a link to the letter from their administrator encouraging them to participate. If the participant chose to participate, they were directed to the survey. If they chose not to participate, they were directed away from the informed consent page onto an internet search engine page. At the end of the survey, participants were given the choice of entering a drawing for one of ten \$50 bank cards. If they chose to participate, they were directed to a separate email account where they left their contact information.

A follow up email reminder was sent one week, two weeks, and three weeks after the initial invitation to all participants on the three listservs. Once access to the survey site was closed, ten participants were randomly drawn for the \$50 bank cards and their cards were mailed to them.

Advantages of Electronic Surveys

An electronic survey was used for this study (see Appendix B). There are several advantages of electronic surveys including: (a) a faster response time compared to traditional mail surveys, (b) lower costs, and (c) fewer errors with data entry (Shannon, 2002).

Past researchers have reported that the return of electronic surveys was as much as 5 days faster than mailed surveys (Crowley, 1995). Extension culture supports the use of email in daily work and a web survey is a natural extension of the work environment. Furthermore, people feel more comfortable with electronic responses which decrease the likelihood that participants will give socially acceptable responses and increase the potential for more accurate responses (Dillman, 2000; Wright, 2005).

Developing and sending a Web survey is substantially less costly than the development and printing cost of paper-pencil surveys. Costs for paper surveys include the costs of printing copies of the survey, the cover letter, and reminder letters. Envelopes are needed for the survey and reminder letters to mail to participants.

Data entry through Web surveys is completed by the respondents and is practically free from error. This saves the researcher a tremendous amount of time and reduces the chance for human error in the data (Schaufeli et al., 2002).

Disadvantages of Electronic Surveys

Some of the disadvantages of electronic surveys include: (a) the change of email addresses, (b) some users' discomfort with using technology, (c) lack of access to email and the

Internet, and (d) differences in screen configurations from one respondent to another (Dillman, 2000).

Table 3.1 shows the participating states by Cooperative Extension System Regions. A proportional sample from each of the states within a region was randomly drawn. Extension administrators in each state were contacted to confirm the selected participants' employment and contact information within their institution. A 95% level of confidence and a five percent confidence interval was set as the goal for this study.

Descriptive Characteristics of the Sample

There were 5,100 participants invited to participate in this study. There were 150 values (responses) missing completely at random which were removed from the sample. This included participants who began the survey, but prematurely exited before the survey was finished. The final total survey responses equaled $n = 2,782$ for a total response rate of 55%. Non-response bias could not be tested in this study due to privacy issues of the participants. A total of 46 out of 50 states participated in the study. There were no participants from Iowa, Nevada, the District of Columbia, or Alaska. The stratified sample included 13.6% ($n = 358$) respondents from the Western Region, 29.7% ($n = 785$) from the North Central Region, 44.7% ($n = 1,181$) from the Southern Region, and 12% ($n = 308$) from the North Eastern Region. The largest number of participants were from North Carolina with 7.1% ($n = 187$) followed by Texas with 5.6% ($n = 148$). Delaware and Hawaii had the least number of participants with .1% and .2% respectfully

Table 3.1 Participating States by Cooperative Extension System Regions

WESTERN	N	Percent	NORTH CENTRAL	N	Percent	SOUTHERN	N	Percent	NORTH EAST	N	Percent
Arizona	25	.9	Illinois	112	4.3	Alabama	63	2.4	Connecticut	10	.4
California	44	1.7	Indiana	106	4.0	Arkansas	52	2.0	Delaware	2	.1
Colorado	41	1.6	Kansas	87	3.3	Florida	73	2.8	Maine	18	.7
Hawaii	6	.2	Michigan	82	3.1	Georgia	95	3.6	Maryland	32	1.0
Idaho	36	1.4	Minnesota	56	2.1	Kentucky	132	5.0	Massachusetts	20	.8
Montana	43	1.4	Nebraska	58	2.2	Louisiana	81	3.1	New Hampshire	18	.7
New Mexico	18	.7	North Dakota	45	1.7	Mississippi	49	1.9	New Jersey	16	.6
Oregon	51	1.7	Ohio	106	4.0	North Carolina	187	7.1	New York	64	2.4
Utah	26	1.0	South Dakota	15	.6	Oklahoma	55	2.1	Pennsylvania	91	3.5
Washington	44	1.7	Wisconsin	118	4.3	South Carolina	39	1.5	Rhode Island	10	.4
Wyoming	24	.9				Tennessee	128	4.9	Vermont	7	.3
						Texas	148	5.6	West Virginia	30	1.1
						Virginia	79	3.0			
TOTAL	358	13.6		785	29.7		1,181	44.7		318	12.0

(n = 2; n = 6). Concerning gender, women represented 62.1% (n = 1,717) while men represented 37.9% (n = 1050) of the respondents. Respondents age 50 - 56 represented 29.6% (n = 818) of the sample followed by 22.5 % (n = 621) ages 43 – 49, 14% (n = 391) ages 57 and above, 13.3% (n = 368) ages 29 - 35, and 7.5% (n = 208) ages 22 – 28. Single respondents (never been married) represented 12.3% (n = 341) of the sample with 76% (n = 2,103) married; divorced and not married 8.2 % (n = 227); widowed 1.4% (n = 40); separated .9 % (n = 25); and other 1.1% (n = 30). Concerning the highest degree earned, the majority of the respondents (71.1% or n = 1964) held a Master's degree followed by 22.2% (n = 614) with a Bachelor's degree, 6.4% (n = 178) with a Doctorate degree, and .3% (n = 7) with another degree.

Number of Hours of Work, Major Area of Job Responsibility and Years in Present Position

The number of hours worked in Extension per week ranged from 10 to 80 with a mean of 49.7. There were 2.4% (n = 67) of the respondents working less than 40 hours per week, 36.6% (n = 1018) working 40 – 49 hours, 53% (n = 1259) working 50-60 hours, 13.7% (n = 382) working 61-70 hours, and 2% (n = 56) working 71-80 hours.

Extension professionals with their major area of responsibility in agriculture represented 25.3% (n = 700) of the respondents followed by 22.2% (n = 616) in 4-H and youth development and 18.2% (n = 503) in family and consumer sciences. Those with marine responsibilities represented the least number of respondents with .6% (n = 17).

The length of employment in present position ranged from 1 to 40 years with a mean of 9.23 years.

Supervisor Status and Level of Position

Supervisor status was split with 49.5% (n = 1363) being in supervisory positions and 50.5% (n = 1404) not being in supervisory positions. The largest position level represented by respondents was county/township/parish (83.7% or n = 2382) followed by district/area/regional (12.5% or n = 347) and state (3.8% or n = 105).

Number of Children in Household and Children's Age Range

Nearly half of the sample (48.2%, n = 1,340) had at least one child living at home. There were 1,442 who had non-parental status. Of those who had children, participants were asked to give the ages of the children living at home. There were 52.6% (n = 705) of the respondents' children between the ages of 11 – 18, there were 35.1% (n = 471) between the ages 5 – 10, 21.4% (n = 287) ages 1 – 4; and 7.5% (n = 100) under age 1.

Data Collection

Data was collected through The University of Tennessee Office of Information using the mrinterview (mr is market research) web survey tool. Once the survey design was entered into a web browser, mrinterview sent out email invitations and reminders, collected data, and downloaded the data into an SPSS file. At the end of the survey, participants were given the option of entering a drawing for one of ten \$50 bank cards. Those who chose to participate were given a link to email their contact information.

Constructs and Instrumentation

Seven instruments were completed by the participants in this study: (1) Work Engagement, (2) Work-Family Conflict, (3) Family-Work Conflict, (4) Supervisor Support to Manage Work, Personal and Family Life, (5) Family Support for Work and Family Roles, (6) Spousal/Partner

Support for Work and Family Roles, and (7) Support Appraisal for Work Stressors (direct supervisor, colleague, and non-work). A brief discussion of each instrument will now follow.

Dependent Variable Operational Definitions

Work engagement (ENGAGE). Respondents were asked to complete the Utrecht Work Engagement Scales (Schaufeli et al., 2002) which consists of three subscales: vigor, dedication, and absorption. It is a 15-item, 7-point Likert-type scale where 1 = never and 7 = always (every day). This instrument has been validated in several countries around the world including China (Yi-Wen & Yi-Qun, 2005), Finland (Hakanen et al., 2006), Greece (Xanthopoulou et al., 2009), South Africa (Storm & Rothmann, 2003), Japan (Shimazu et al., 2008), Spain (Schaufeli et al., 2002), and the Netherlands (Schaufeli & Bakker, 2003). In each study, confirmatory factor analyses of the three factor structure was found to be superior to alternative models (Bakker et al., 2008). The internal consistencies of the three subscales has been good with the Cronbach's alpha being .80 - .90 (e.g. Montgomery et al., 2003; Salanova, Llorens, Cifre, Martinez, & Schaufeli, 2003; Xanthopoulou et al., 2009). The Cronbach's alpha for this study was .93. Scale items, past and current reliability coefficients of the Utrecht Work Engagement Scales are shown in Table 3.2. The scale consists of three subscales including:

Vigor. A manifest variable of engagement that is represented by high energy levels and “mental resilience” during work, the readiness to devote effort during work, and perseverance while working in difficult situations (Schaufeli et al., 2002). There were 6 items in the vigor subscale. Previous studies have found a Cronbach's Alpha for this subscale at .79. The Alpha for this study was .88.

Dedication. A manifest variable component of engagement that is exemplified by a “sense of significance, enthusiasm, inspiration, pride, and challenge” (Schaufeli et al., 2002). There were 5 items in the dedication subscale. Previous studies have found a Cronbach’s Alpha for this subscale at .89. The Alpha for this study was .85.

Absorption. A manifest variable component of engagement that is exemplified by full concentration and engrossment in work, which results in time passing quickly and causes one to have problems with separating them self from work (Fields, 2002). There were 6 items in the absorption subscale. Previous studies have found a Cronbach’s Alpha for this subscale at .72. The Alpha for this study was .85.

Predictor Variable Operational Definitions

Work to family conflict (WFC). “A form of inter-role conflict in which the role pressures from the work domain are incompatible with the role pressures from the family domain” (Carlson et al., 2000). Work to family conflict (WFC) was measured using the Work Family Conflict (WFC) Scale, a 9-item, 5- point Likert type instrument composed of time-based, strain-based, and behavior-based 3-item subscales where 1 = strongly disagree and 5 = strongly agree (Greenhaus & Beutell, 1985). Cronbach’s Alpha for the full scale in a previous study was .87. The Cronbach’s Alpha for the full scale in this study was .86. A Sample item and past and current alpha coefficients for each of the three subscales is shown in Table 3.2. Carlson et al. (2000) found discriminant validity for the three subscales by assessing the factor correlations. Correlations of the three subscales ranged from .31 to .58. As noted by Mathews, Kath and Barnes-Farrell (2010) the WFC scale has been used in over 25 empirical studies. Additionally,

the subscales have been used individually (Bruck et al., 2002). A definition of each subscale follows.

Time-based WFC. Three-item subscale which measures how time devoted in one role makes it difficult to contribute to another role. Previous studies have found a Cronbach's Alpha for this subscale at .87. The Alpha for this study was .84.

Strain-based WFC. Three-item subscale measuring the extent to which strain is experienced in one role that interferes with contributing to another role. Previous studies have found a Cronbach's Alpha for this subscale at .85. The Alpha for this study was .86.

Behavior-based WFC. Three-item subscale measuring the extent to which particular behaviors necessary in one role are incompatible with the expectations of other. Previous studies have found a Cronbach's Alpha for this subscale at .78. The Alpha for this study was .82.

Family to work conflict (FWC). "A form of inter-role conflict in which the role pressures from the family domain are incompatible with the role pressures from the work domain"(Carlson et al., 2000) (p. 249). Family to work conflict (FWC) will be measured using the Family Work Conflict (FWC) Scale, a 9-item, 5-point Likert type scale composed of time-based, strain-based, and behavior-based 3-item subscales where 1 = strongly disagree and 5 = strongly agree (Carlson et al., 2000). Carlson, Kacmar, and Williams (2000) found discriminant validity for the three subscales by assessing the factor correlations. Correlations of the three subscales ranged from .24 - .83. Structural equation models have found that these subscales best define the constructs. Differential relationships have been found for family social support, job satisfaction (strain-based), and organizational commitment (behavior based) (Greenhaus &

Beutell, 1985). The Cronbach's Alpha in past studies have ranged from .70 - .87. The Cronbach's Alpha for this study was .86. Sample items and past and current alpha coefficients for each subscale are shown in Table 3.2. Similar to WFC, the FWC has been used in over 25 research studies (Matthews et al., 2010). Additionally, the subscales have been used individually (Bruck et al., 2002). A definition of each of the three subscales follows.

Time-based FWC. Three-item subscale which measures the degree to which time devoted in one role makes it difficult to contribute to another role. Previous studies have found a Cronbach's Alpha for this subscale at .79. The Alpha for this study was .81.

Strain-based FWC. Three-item subscale measuring the degree to which strain experienced in one role that interferes with contributing to another role. Previous studies have found a Cronbach's Alpha for this subscale at .87. The Alpha for this study was .88.

Behavior-based FWC. Three-item subscale which measures the degree to which particular behaviors necessary in one role are incompatible with the expectations of other (Friedman & Greenhaus, 2000). Previous studies have found a Cronbach's Alpha for this subscale at .75. The Alpha for this study was .89.

Social Support Mediator Variables Operational Definitions – Work Domain

Supervisor support for work, personal and family life (SUPSUP). Managers or supervisors are understanding of their employee's need for balance between work and family and make a concerted effort to help the employee accommodate his or her work (Bond et al., 2005). This construct was measured using the Supervisor Support to Manage Work, Personal and Family Life (SUPSUP) instrument and was used in the Families and Work Institute, National

Study of the Changing Workforce (NSCW) (Bond et al., 2005). The SUPSUP is a 5-item scale where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

In the 2002 NSCW study the entire scale had an internal reliability of 0.89 in 1997 and .91 in 1998. In this study the Cronbach's Alpha was .91. A sample item and reliability coefficient is shown in Table 3.2. Additionally, this scale has had correlations of .51 with job satisfaction in the past.

Global Supervisor Support (GLOSUPSUP). The degree to which there is perceived available supervisor support in buffering the negative effects of workplace stressors. Global supervisor support was measured using the Support Appraisal for Work Stressors (SAWS) inventory. Lawrence, Gardner, and Callan (2007) created the SAWS inventory using an adaptation of Terry, Rawle, and Callan's (1995) Work Support Scale and assesses three sources of support: direct supervisor, colleague, and non-work. Each of the three support subscales consist of 12 items where 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = strongly agree, and 6 = not applicable. Within each source four distinct supportive functions are assessed: emotional, informational, instrumental, and appraisal. The SAWS scale has been used in a handful of studies (e.g. Harter et al., 2003; Lawrence et al., 2007; Llorens et al., 2006). Cronbach's Alphas in past studies have ranged from .94 to .98 (Salzano, Lindemann, & Tronsky, 2012). In this study the Cronbach's Alpha was .97. A description of each SAWS subscale now follows.

SAWSSUP (emotional). A manifest set of variables that measures the degree to which supervisors show concern or listen to the employee (Lawrence et al., 2007). Previous

studies have found a Cronbach's Alpha for this subscale at .87. The Alpha for this study was .94.

SAWSSUP (informational). A manifest set of variables that measures the degree to which supervisors provide information or advice (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .86. The Alpha for this study was .90.

SAWSSUP (instrumental). A manifest set of variables that measures the degree to which supervisors provide help to the employee with regards to labor or time (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .88. The Alpha for this study was .93.

SAWSSUP (appraisal). A manifest set of variables that measures the degree to which supervisors provide information relevant to self-evaluation to the employee (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .90. The Alpha for this study was .92.

A sample item and reliability coefficient for each subscale is shown in Table 3.3.

Colleague Support (COLSUP). The degree to which colleagues provide emotional, informational, instrumental, and appraisal support. This construct was measured using the Support Appraisal for Work Stressors – Colleague (SAWSCO) Scale consisting of the following subscales:

SAWSCO (emotional). A manifest set of variables of the work support construct that measures the degree to which colleagues show concern or listen to the employee (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .81. The Alpha for this study was .97.

SAWSCO (informational). A manifest set of variables that measures the degree to which colleagues provide information or advice (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .76. The Alpha for this study was .91.

SAWSCO (instrumental). A manifest set of variables that measures the degree to which colleagues provide help to the employee with regards to labor or time (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .82. The Alpha for this study was .93.

SAWSCO (appraisal). – A manifest set of variables that measures the degree to which colleagues provide information relevant to self-evaluation to the employee (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .80.

The Alpha for this study was .93. A sample item and reliability coefficient for each subscale is shown in Table 3.2.

Social Support Mediator Variables Operational Definitions – Non-Work Domain

Non-Work Support (NWSUP). The degree to which partner, family and friends provide support. This construct was measured with the Support Appraisal for Work Stressors – Non-Work (SAWSNW) Scale and consists of the following four subscales:

SAWSNW (emotional). A manifest set of variables that measures the degree to which *partner, family, and friends* show concern or listen to the employee (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .86. The Alpha for this study was .93.

SAWSNW (informational). A manifest set of variables that measures the degree to which *partner, family, and friends* provide information or advice (Lawrence et al., 2007).

Previous studies have found a Cronbach's Alpha for this subscale at .85. The Alpha for this study was .91.

SAWSNW (instrumental). A manifest set of variables that measures the degree to which *partner, family, and friends* provide help to the employee with regards to labor or time (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .84. The Alpha for this study was .91.

SAWSNW (appraisal). A manifest set of variables that measures the degree to which *partner, family, and friends* provide information relevant to self-evaluation to the employee (Lawrence et al., 2007). Previous studies have found a Cronbach's Alpha for this subscale at .86. The Alpha for this study was .92.

The Alpha for the full scale in this study was .96

Family Support for Work and Non-Work Roles (FAMSUP). The degree to which one's family offers support in managing work and non-work roles (Aryee et al., 1999). This construct was measured using an adaptation of the Spousal Support for Work and Non-work roles Scale. This instrument is a 5-item, 6-point Likert-type scale where 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree, and 6 = Not applicable. The Cronbach's Alphas in a previous study was .71 (Bond et al., 2005). In this study the Cronbach's Alpha was .92.

Initially, the Family Support for Work and Non-work Roles Scale and Spousal/partner Support for Work and Non-work Roles Scales were two distinct and separate scales used to measure two distinct constructs (family support and spousal support) in this study. I created the Family Support for Work and Non-work Roles Scale by using the word "family" in place of the

word “spouse” for the additional five items measuring family support. Once it was determined through a discriminant validity test that the scales were measuring the same construct, they were combined into one scale called Family Support for Work and Non-Work Roles.

A sample item and reliability coefficient for each subscale is shown in Table 3.2. As discussed in Chapter 2, structural equation modeling (SEM) was used to test one model in this study. SEM is comparable to multiple regression in that it tests the relationship of several independent and dependent variables. SEM’s advantage over regression however, is that the pathways of a relationship can be simultaneously assessed. Furthermore, SEM allows the researcher the ability to test models, handle difficult data issues, and incorporate confirmatory factor analysis. Anderson and Gerbing (1988) recommend using a two-step approach to structural equation modeling. The first step permits confirmatory analysis of each construct, discriminant, convergent, and nomological validity. It is recommended to have at least four indicators per construct and factor loadings should be .4 or higher. The second step involves testing the hypotheses using the validated constructs in a structural equation model.

Assessment of the Measurement Model

The measurement model defines the relationships between manifest (observed) indicator variables and the latent (unobserved) constructs they are intended to measure. Confirmatory factor analysis (CFA) of the measurement model should be conducted when there is theoretical and empirical evidence of the underlying latent variable structure (Anderson and Gerbing 1988, Byrne 2001). Respecification of the model is often necessary in order to obtain acceptable fit.

Table 3.2 Constructs and Scales

Construct and Scale	Sample Item	Items	Past Alphas	Current Alpha
Work Engagement Construct (ENGAGE) (Dependent Variable) Utrecht Work Engagement Scale ^a (Full Scale)		17	.80 - .90	.93
Utrecht Work Engagement (Vigor)	“At my work, I feel bursting with energy.”	6	.79	.88
Utrecht Work Engagement (Dedication)	“My job inspires me.”	5	.89	.85
Utrecht Work Engagement (Absorption)	“When I am working, I forget everything else around me.”	6 (1 item deleted)	.72	.85
Work-Family Conflict Construct (WFC) (Independent Variable) Work-Family Conflict Scale ^b (Full Scale)		9	.87	.86
WFC Subscale (Time-Based)	“My work keeps me from my family activities more than I would like.”	3	.87	.84
WFC Subscale (Strain-based)	“When I get home from work I am often too frazzled to participate in family activities/responsibilities.”	3	.85	.86
WFC Subscale (Behavior-based)	“The problem-solving behaviors I use in my job are not effective in resolving problems at home.”	3	.78	.82

Table 3.2 Continued

Construct and Scale	Sample Item	Items	Past Alphas	Current Alpha
Family-Work Conflict Construct (FWC) (Independent Variable) Family-Work Conflict Scale ^b (Full Scale)		9	.78- .87	.86
FWC Subscale (Time-based)	“The time I spend on family responsibilities often interferes with my work responsibilities.”	3	.79	.81
FWC Subscale (Strain-based)	“Due to stress at home, I am often preoccupied with family matters at work.”	3	.87	.88
FWC Subscale (Behavior-based)	“The things I do that make me effective at home help me to be more successful at my job.”	3	.75	.89
Supervisor Support for Work/Personal/Family Life Construct (SUPSUP) (Mediator) Supervisor support to manage work, personal and family life Scale ^c	“I feel comfortable bringing up personal or family issues with my supervisor or manager.”	5	.89 - .91	.91

Table 3.2 Continued

Construct and Scale	Sample Item	Items	Past Alphas	Current Alpha
Global Supervisor Support Construct (GLOSUPSUP) (Supervisor) (Mediator)				
Support Appraisal for Work Stressors – Supervisor ^d (SAWSSUP) (Mediator)	“How much can you rely on your <i>direct supervisor</i> ...?”	12		.97
(Emotional)	... to help you feel better when you experience work-related problems?	3	.87	.94
(Informational)	...to suggest ways to find out more about a work situation that is causing you problems?	3	.86	.90
(Instrumental)	...to help when things get tough at work?	3	.88	.93
(Appraisal)	...to reassure you about your ability to deal with your work -related problems?	3	.90	.92

Table 3.2 Continued

Construct and Scale	Sample Item	Items	Past Alphas	Current Alpha
Colleague Support (COLSUP) (Colleague) (Mediator)				
Support Appraisal for Work Stressors ^d (SAWSCO) (Colleague) (Mediator)	How much can you rely on your colleagues.....?	12		.97
(Emotional)	...to help you feel better when you experience work-related problems?	3	.81	.95
(Informational)	...to suggest ways to find out more about a work situation that is causing you problems?	3	.76	.91
(Instrumental)	...to help when things get tough at work?	3	.82	.93
(Appraisal)	...to reassure you about your ability to deal with your work -related problems?	3	.80	.93

Table 3.2 Continued

Construct and Scale	Sample Item	Items	Past Alphas	Current Alpha
Non-work Support (NWSUP) (Non-work)				
Support Appraisal for Work Stressors ^d (SAWSNW) (Non-work) (Mediator)	How much can you rely on your spouse/partner/friends.....?	12		.96
(Emotional)				
(Informational)	...to help you feel better when you experience work-related problems?	3	.86	.93
(Instrumental)	...to suggest ways to find out more about a work situation that is causing you problems?	3	.85	.91
(Appraisal)	...to help when things get tough at work?	3	.84	.91
	...to suggest ways to find out more about a work situation that is causing you problems?	3	.86	.92

Table 3.2 Continued

Construct and Scale	Sample Item	Items	Past Alphas	Current Alpha
Family support for work & non-work roles Construct (FAMSUP) (Mediator)				
Family support for work & non-work roles ^{d e}	"My family understands that I have to accomplish both work and family duties."	10	.71	.92

a Never-always (1 = "never," 7 = "always")

b Agree – disagree scale (1 = "strongly disagree," 5 = "strongly agree")

c Agree –disagree scale (1 = "strongly disagree," 4 = "strongly agree")

d Strongly disagree-strongly agree-not applicable scale (1 = "strongly disagree," 5 = "strongly agree," 6 = "not applicable")

e Due to almost identical wording in items, Family Support for Work and Non-Work Roles and Spousal/Partner Support for Work and Non-Work Roles were combined into one scale called Family Support for work and non-work roles.

The CFA for each construct is first analyzed individually. The second step is to include each construct into one full measurement model and to allow all latent variables to correlate freely. The third step involves using a structural model to specify the causal relationships of the constructs and to test the hypotheses.

Prior to testing the hypotheses in the structural models, the individual measurement model for each construct and the full measurement model were assessed using latent constructs: work family conflict (WFC) and family work conflict (FWC) as antecedents. The mediator constructs tested included family support for work and non-work roles (FAMSUP), supervisor support for work, personal, and family life (SUPSUP), non-work support (NWSUP), global supervisor support (GLOSUPSUP), and colleague support (COLSUP). The outcome construct tested was work engagement (ENGAGE). Byrne (2010) recommends the following steps for assessing a measurement model:

1. Examine the results for offending estimates including negative or non-significant error variances for any construct or very large standard errors.
2. Examine and correct any violations of univariate normality (kurtosis > 4).
3. Examine scale confirmation to achieve unidimensionality through:
 - a. Overall goodness-of-fit model – measures the degree to which the observed data are predicted by the estimated model. Typically, the following are examined: Chi-square (χ^2) ($\chi^2 < 5$); root mean square of approximation (RMSEA); ($< .05$ = very good, $< .08$ = acceptable, $< .10$ = mediocre, $\geq .10$ = poor); comparative fit index (CFI) (close to 1); and consistent Akaike information criterion (CAIC) (select lowest).

- b. Convergent validity – observed items have substantial loadings on the constructs they are measuring to show that over half the variance is captured by the latent constructs (standard regression weights $> .4$).
 - c. Discriminant validity– exists when each item loads more highly on its assigned construct than on the other constructs.
4. Examine the reliability through regression weights ($> .4$), Cronbach's alpha ($> .70$), and average variance extracted (AVE $> .5$).

Measurement Model – Work-family Conflict, Support Mediators and Employee Engagement Outcomes

The measurement model for each individual construct will first be assessed. Second, a full measurement model which includes all constructs will be assessed followed by the full structural model. Each model will be examined for offending estimates or violations of normality. The model converged on a proper solution and assessment of the scales was confirmed. To achieve scale confirmation, the unidimensionality, reliability, and construct validity will be examined through AMOS output including goodness of fit indicators, standardized regression weights, modification indices, and squared multiple correlations.

The measurement model developed defines the relationships between the manifest (observed) indicator variables and the latent (unobserved) constructs they are intended to measure. The scales used in this portion of the overall model included 9 items from the Work Family Conflict Scale (WFC), 9 items from the Family Work Conflict Scale (FWC), 10 items from the Family Support for Work and Non-Work Roles Scale (FAMSUP), 5 items from the Supervisor Support to Manage Work, Personal, and Family Life Scale (SUPSUP), 17 items from

the Work Engagement Scale (ENGAGE), 12 items from the Support Appraisal for Work Stressors – Non-work (SAWSNW) Scale, 12 items from the Support Appraisal for Work Stressors– Colleague (SAWSCO) Scale, and 12 items from the Support Appraisal for Work Stressors – Supervisor (SAWSSUP) Scale. It should be noted that the Family Support Scale (FAMSUP) was initially two scales: Family Support for Work and Non-work Roles and Spousal/Partner Support for Work and Non-work Roles. The two were combined due to lack of discriminant validity indicating they were measuring the same construct.

To achieve scale confirmation, the unidimensionality, reliability, and construct validity were examined through AMOS output including goodness of fit indicators, standardized regression weights, modification indices, and squared multiple correlations. Each construct will be assessed through individual confirmatory factor analysis and finally through a full measurement model.

Work-family/Family-work Conflict Measurement Model

The work-family/family-work conflict construct will be measured using the Work-Family/Family-Work Conflict Scale which consists of three subscales and 18 items. To determine the best fit, comparisons were made between the initial Apriori six-factor model and three-factor, two-factor, and single-factor models. Figure 3.1 displays the Apriori measurement model recommended by Carlson, et al. (2000) to test the work-family/family-work constructs. This model resulted in a CFI = .981, RMSEA = .040, and CAIC = 1106.42. The standardized regression weights (see Figure 3.1) ranged from .70 to .92 ($p < .001$). There was a high covariance with this Apriori model between WFC behavior and FWC behavior ($r = .74$).

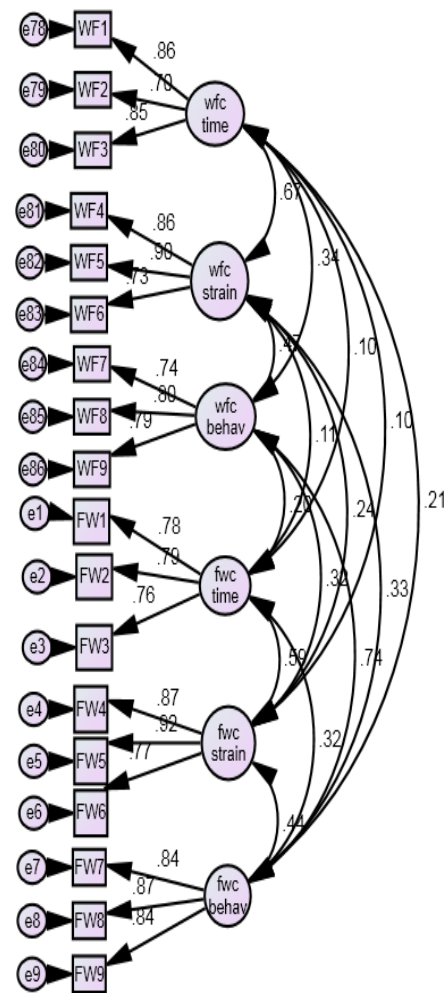


Figure 3.1. Apriori Work-Family Conflict Measurement Model

This study emphasized two separate domains of conflict. Therefore, it was prudent to develop measurement models for both work-to-family conflict and family-to-work conflict. Figure 3.2 illustrates this domain specific measurement model with six first order factors composed of WFC time, strain, and behavior and FWC time, strain, and behavior as well as two second order factors of WFC and FWC. The model resulted with CFI = .928, RMSEA = .075, and CAIC = 2535.22. The standardized regression weights (see Figure 3.2) of the first-order factors ranged from .48 to .96 ($p < .001$) and a correlation analysis between WFC and FWC was significant at $r = .367, p \leq .01$. Due to the marginal fit this model provided, a covariance model (see Figure 3.3) was tested using nested model comparisons.

To test for discriminant validity, Anderson and Gerbing (1988) recommend comparing the parameter estimates for a two factor constrained model to the parameter estimates for an unconstrained model. If the unconstrained model results in a chi-square of less than or equal to 3.84 lower than the constrained model, then the two factor solution provides better fit to the data and discriminant validity is achieved. The covariance models were tested using nested model comparisons for three tests: the default model (WFC-FWC co-vary), WFC-FWC = 0 (WFC-FWC do not co-vary), and WFC-FWC = 1 (constructs co-vary completely). These tests will determine the discriminant validity of each model. As shown in Table 3.3, the results demonstrate a lack of discriminant validity. Due to the excessively high covariance between WFC and FWC ($r = .74$) and the marginal RMSEA fit of these models, the decision was made to combine WFC and FWC into a single construct. To combine the WFC and FWC constructs into a single construct two alternative models are available. The first modeling alternative is work-family/family-work conflict as a single, first order latent variable with 18 items.

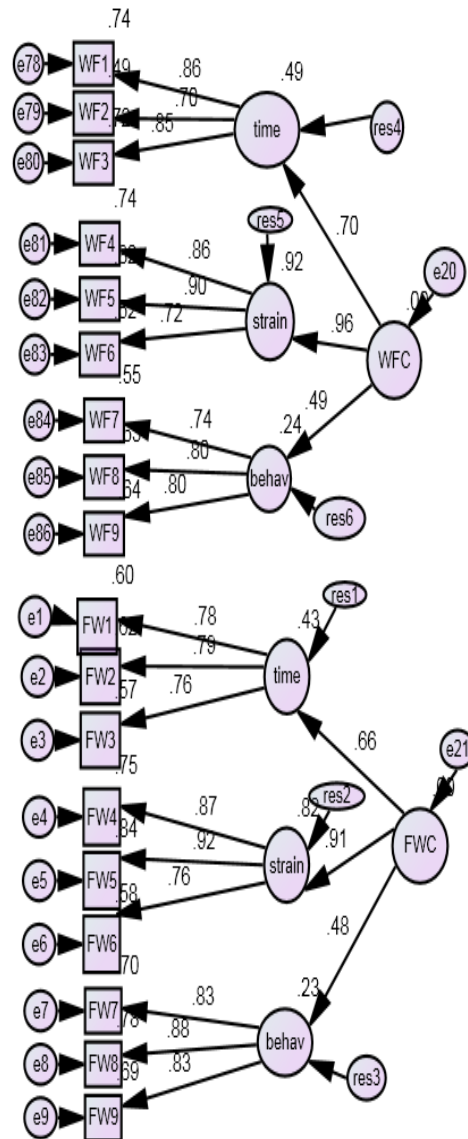


Figure 3.2. Domain Specific Work-Family Conflict Measurement Model

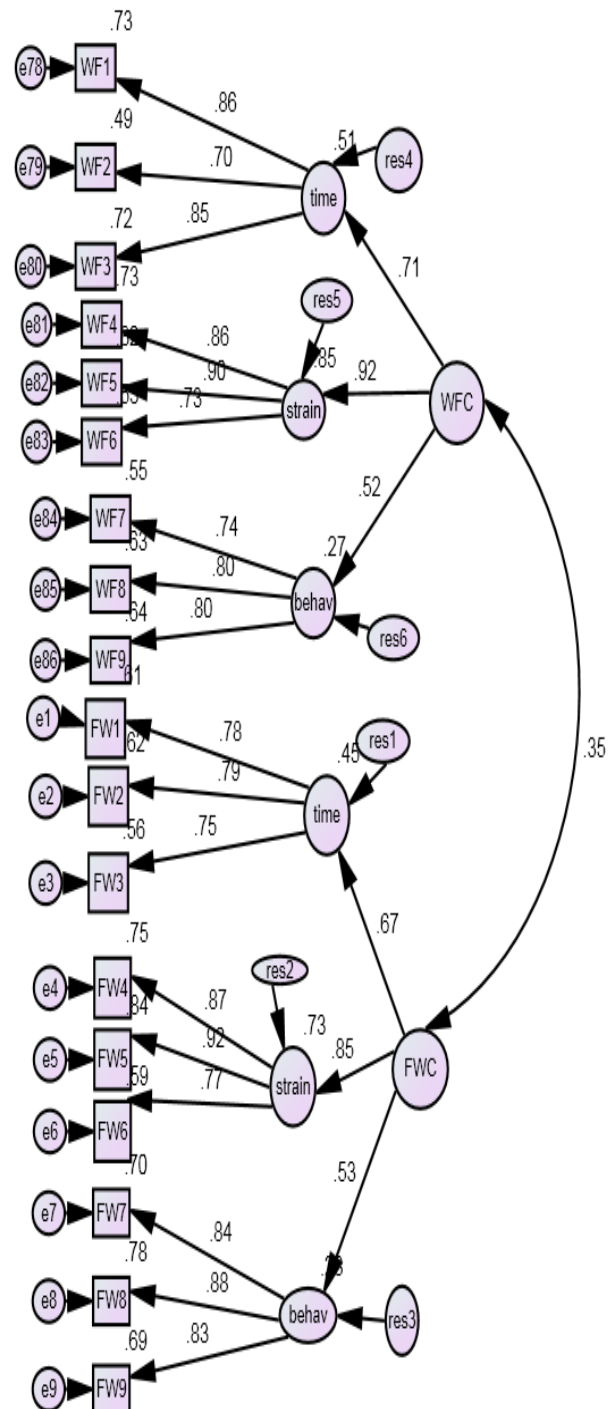


Figure 3.3. Domain Specific Work-Family Conflict Covariance Measurement Model

Table 3.3. Work/family Conflict Discriminant Validity Test

Model	CMin (df)	GFI	RMSEA¹	CFI²	CAIC	ΔCMin (<i>p</i>)
Default (WFC-FWC co-vary)	1968.02*** (128)	.935	.072	.935	2352.05	
WFC-FWC=0 (discriminant validity exists)	2160.12*** (129)	.930	.075	.928	2535.22	192.10 (.000)***
WFC-FWC=1(no discriminant validity)	2307.60*** (129)	.920	.078	.923	2682.70	339.58 (.000)***

¹ <.05 = very good, < .08 = acceptable, <.10 = mediocre, \geq .10 = poor errors of approximation

² .90 - .94 = good fit, \geq .95 = very good fit (Bryne 2001).

The second modeling alternative is work-family/family-work conflict as a single, second-order construct with six first-order constructs (WFC-time, WFC-strain, WFC-behavior, FWC-time, FWC-strain, and FWC-behavior) which consists of 18 items. Due to the structural differences between these models nested models comparisons is not possible and it will be necessary to examine the fit indices to make comparisons. Table 3.4 indicates that work-family/family-work conflict as a single, second order construct (see Figure 3.4) is the better model, with better fit statistics and a CAIC dramatically lower than the first-order model. Discriminant validity results are shown in Table 3.3. Correlations ranged from .09 - .63. As shown in Table 3.5, correlations were below .80, which is generally indicative of discriminant validity (Bagozzi, Yi, & Phillips, 1991). All correlations for the six first-order constructs were within this specification. This demonstrates that the first-order constructs are unique. However, wide variation was found in the standard regression estimates of these first-order constructs on the single, second-order conflict construct (i.e. .37-.85). Only one estimate was below the recommended criteria of $> .40$

Table 3.4. Work-family conflict Final Models

Model	CMin (df)	GFI	RMSEA¹	CFI²	CAIC
Work-family conflict – 1 st order construct	16186.24*** (135)	.514	.207	.431	16507.75
Work-family conflict as 2 nd order construct	2307.60*** (129)	.920	.078	.923	2682.70

¹ <.05 = very good, < .08 = acceptable, <.10 = mediocre, ≥ .10 = poor errors of approximation

² .90 - .94 = good fit, ≥ .95 = very good fit (Bryne 2001).

Table 3.5. Work-family Conflict First Order Variable Correlations

	1.	2.	3.	4.	5.	6.
1. WFC-time	(.838)					
2. WFC-strain	.603**	(.864)				
3. WFC-behavior	.301**	.403**	(.821)			
4. FWC-time	.086**	.097**	.167**	(.813)		
5. FWC-strain	.096**	.233**	.286**	.518**	(.883)	
6. FWC-behavior	.194**	.304**	.634**	.271**	.403**	(.886)

Cronbach's Alpha reliabilities are on the diagonal.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

(FWC time-Conflict = .36). Interestingly, both WFC-behavior and FWC-behavior first order constructs had factor loadings on conflict of greater magnitude (WFC-behavior = .854 and FWC-behavior = .814) than the other constructs. This finding suggests that future research should examine the causal relationships among the first order constructs. Due to these findings, the final model shown in Figure 3.4 will be work-family conflict as a single, second order construct with six first order constructs of WFC time, WFC strain, WFC behavior, FWC time, FWC strain,

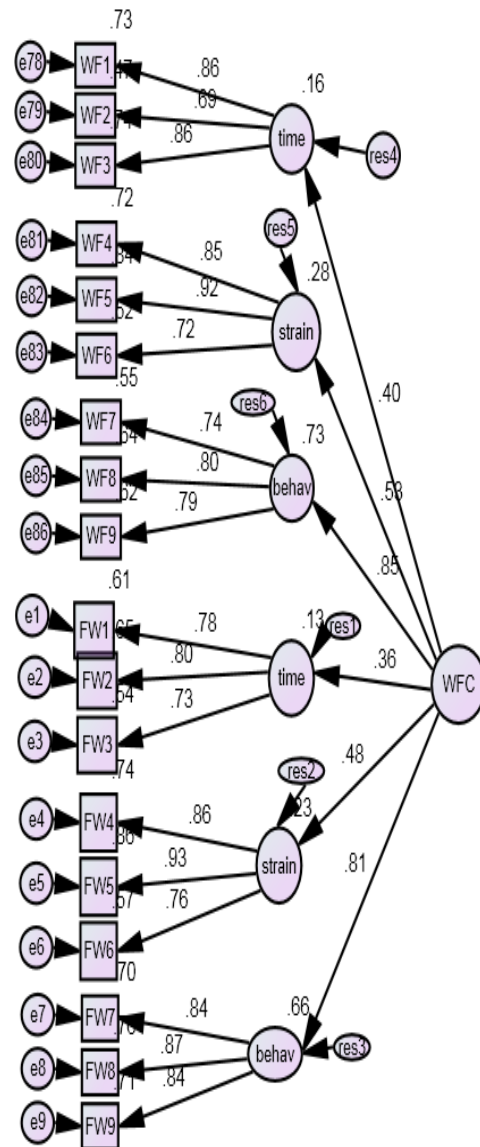


Figure 3.4. Final Work-Family Conflict Measurement Model

and FWC behavior with eighteen indicators. The final Cronbach's Alpha was .88.

Work Engagement Measurement Model

The work engagement construct was tested using the Work Engagement Scale which consisted of three subscales: absorption, dedication, and vigor and 17 indicators.

The final work engagement model is shown in Figure 3.5. The initial model resulted in a CFI = .734 and RMSEA = .157. An examination of the standard regression weights found item *ENGAAB4 (It is difficult to detach myself from my job)* = .310. This is below the recommended .40 criteria. Once this item was deleted, the model resulted in a CFI = .769 and RMSEA = .152. As shown Figure 3.5, all standard regression weights met the .40 criteria and ranged from .40 to .80. To achieve more acceptable CFI and RMSEA levels, the modification indices (MI) were examined to determine where the model might be relaxed. While large MIs may indicate the presence of factor cross loadings, these cross loadings were not indicated. Instead, the MIs suggested that a number of items within the factors correlated more highly than would be expected. When a factor is theoretically comprised of sub-factors, correlating the error terms associated with the sub-factors is appropriate if there is strong theoretical justification (Gerbing & Anderson, 1984). After each set of error terms is correlated, it is further recommended to run the model each time and examine the fit (note: the model was run and fit levels examined after each set of error terms were correlated until acceptable RMSEA and CFI levels were achieved). A pattern of high MIs eventually emerged within each of the subscales and the decision was made to covary the error terms within each subscale. Co-varying the error terms in each subscale

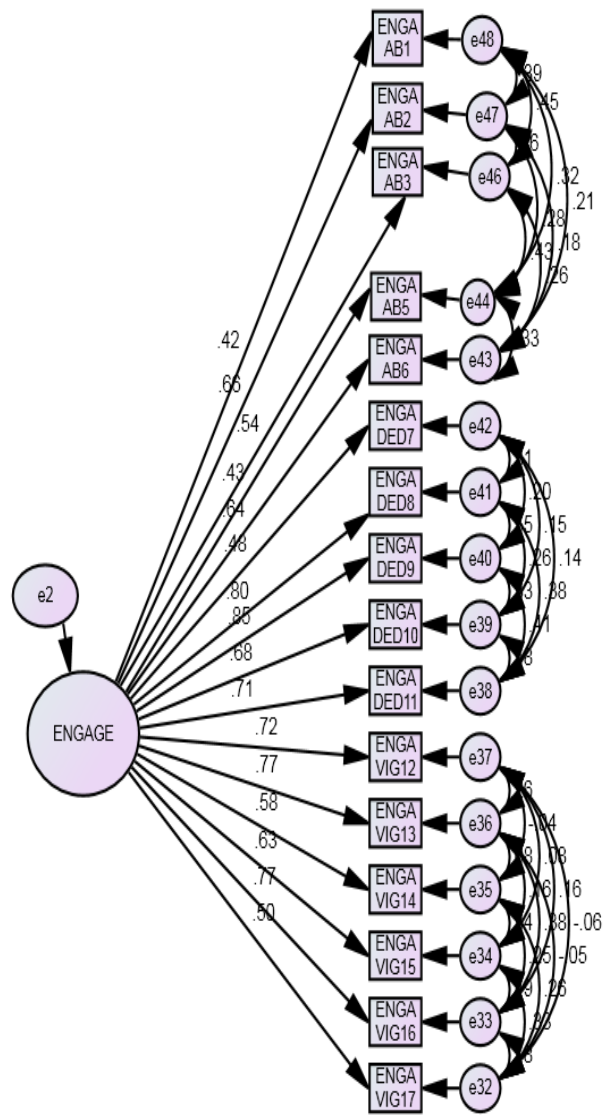


Figure 3.5. Final Work Engagement Measurement Model

resulted in an acceptable fit of the final model with CFI = .983 and RMSEA = .051. The standard regression weights in the final model shown in Figure 3.5 ranged from .42 to .85, $p < .001$.

The scale reliability was $\alpha = .93$.

Global Supervisor Support Measurement Model

The global supervisor support construct was measured using the Support Appraisal for Work Stressors – Supervisor Scale which consisted of four subscales and 12 indicators. The final global supervisor support measurement model is shown in Figure 3.6. The initial model resulted in a CFI = .940 and a RMSEA = .126. All standard regression weights were $\geq .40$. To achieve a more acceptable fit, the Modification Indices were examined to determine where the model might be relaxed. As with the Work Engagement Scale, after several iterations, a pattern of high M.I.s emerged within each subscale. The decision was made to co-vary the error terms within each subscale. This produced a CFI = .980 and a RMSEA = .08. The standard regression weights in the final model shown in Figure 3.6 ranged from .80 to .89, $p < .001$. The scale reliability was $\alpha = .97$.

Supervisor Support for Work, Personal, and Family and Family Life Measurement Model

The supervisor support for work, personal, and family life construct was measured using the Supervisor Support to Manage Work, Personal, and Family Life Scale which consisted of five indicators. The final supervisor support for work, personal, and family life measurement model is shown in Figure 3.7. The initial CFA = .965 and the RMSEA = .152. All standard regression weights were $\geq .40$. To achieve a more acceptable fit, the Modification Indices were examined to determine where the model might be relaxed. The M.I.s for SUPSUP1 (*My*

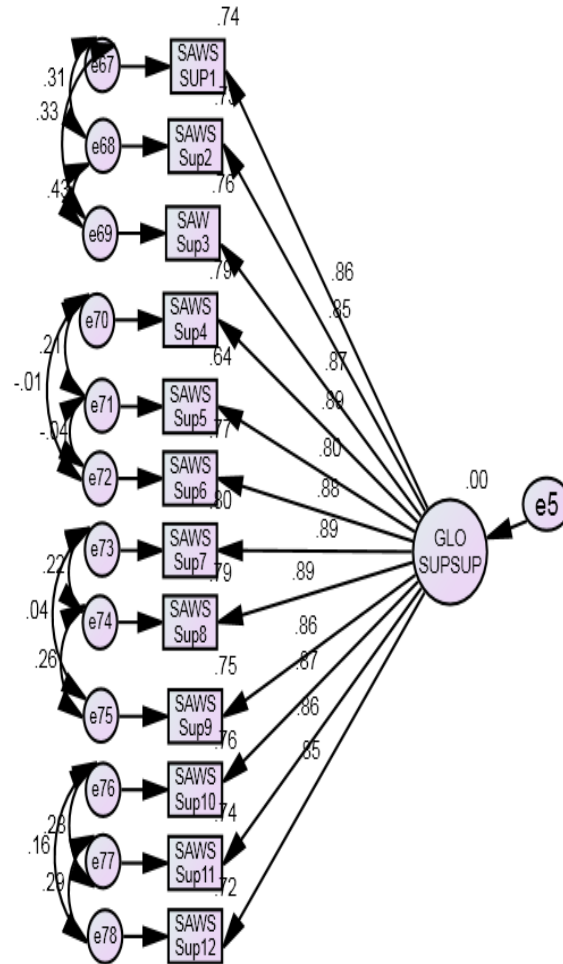


Figure 3.6. Global Supervisor Support Measurement Model

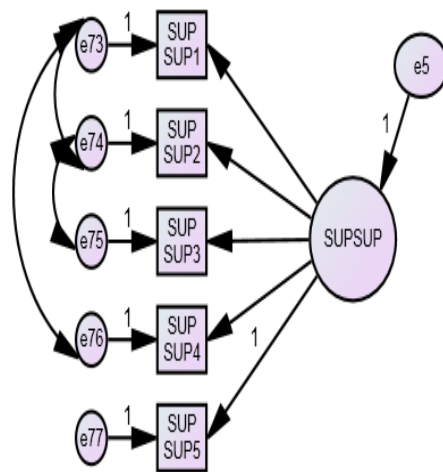


Figure 3.7. Supervisor Support for Work, Personal, and Family Life Final Measurement Model

supervisor or manager is fair and doesn't show favoritism in responding to employees' personal or family teacher, etc.) and SUPSUP2 (*My supervisor or manager accommodates me when I have family or personal business to take care of – for example, medical appointments, meeting with child's teacher, etc.*) was 183.32. These two items were similar in what they were measuring, so the decision was made to co-vary their error terms. This iteration produced a CFI = .986 and RMSEA = .106. The M.I. indices indicated an M.I. = 32.15 for SUPSUP1 (*My supervisor or manager is fair and doesn't show favoritism in responding to employees' personal or family needs* and SUPSUP4 (*I feel comfortable bringing up personal or family issues with my supervisor or manager*). The decision was made to co-vary SUPSUP1 and SUPSUP4. This resulted slightly improved fit of CFI = .991 and RMSEA = .100. The M.I. indices were examined again and the items SUPSUP2 (*My supervisor or manager accommodates me when I have family or personal business to take care of – for example, medical appointments, meeting with child's teacher, etc.*) and SUPSUP3 (*My supervisor or manager is understanding when I talk about personal or family issues that affect my work*) was 44.43. The decision was made to co-vary SUPSUP2 and SUPSUP3. This iteration produced an acceptable CFI = .997 and RMSEA = .065. The standard regression weights in the final model shown in Figure 3.7 ranged from .76 to .87, $p < .001$. The scale reliability was $\alpha = .91$.

Colleague Support Measurement Model

The global colleague support construct was measured using the Support Appraisal for Work Stressors – Colleague which included 4 subscales and 12 indicators. The final colleague support measurement model is shown in Figure 3.8. The initial model resulted in a CFI = .883

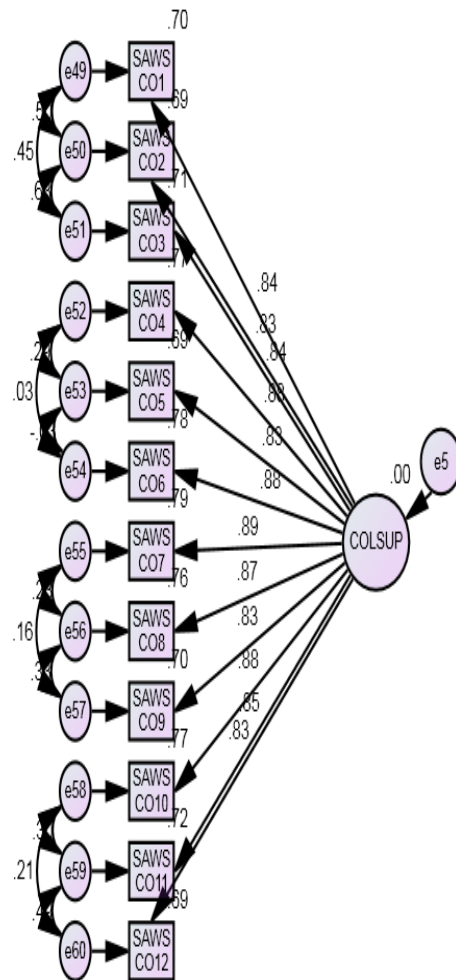


Figure 3.8. Colleague Support Final Measurement Model

and a RMSEA = .178. All standard regression weights were $\geq .40$. To achieve a more acceptable fit the M.I.s were examined to determine where the model might be relaxed. As with the Work Engagement Scale and the Support Appraisal for Work Stressors – Supervisor Scale, after several iterations, a pattern of high M.I.s emerged within each subscale. The decision was made to co-vary the error terms within each subscale. This produced a CFI = .968 and a RMSEA = .105. The standard regression weights in the final model, shown in Figure 3.8, ranged from .83 to .89, $p < .001$. The scale reliability was $\alpha = .97$. Although the RMSEA (.105) was high, all other fit indices were at acceptable levels (Byrne, 2010). This construct will be reevaluated in the full measurement model.

Non-work Support Measurement Model

The non-work support construct was measured using the Support Appraisal for Work Stressors – Non-Work Scale which consisted of four subscales and 12 indicators. The final non-work support measurement model is shown in Figure 3.9. The initial model resulted in a CFI = .873 and a RMSEA = .174. All standard regression weights were $\geq .40$. To achieve a more acceptable fit, the M.I.s were examined to determine where the model might be relaxed. As with the other SAWS scales used in this study, a pattern of high M.I.s emerged within each subscale. The decision was made to co-vary the error terms within each subscale. This produced a CFI = .970 and a RMSEA = .096. The final standard regression estimates shown in Figure 3.9 were all $> .40$ ($p < .001$) and ranged from .78 - .87. The scale reliability was $\alpha = .96$. Although the RMSEA (.096) was high, all other fit indices were at acceptable levels (Byrne, 2010). This construct will be reevaluated in the full measurement model.

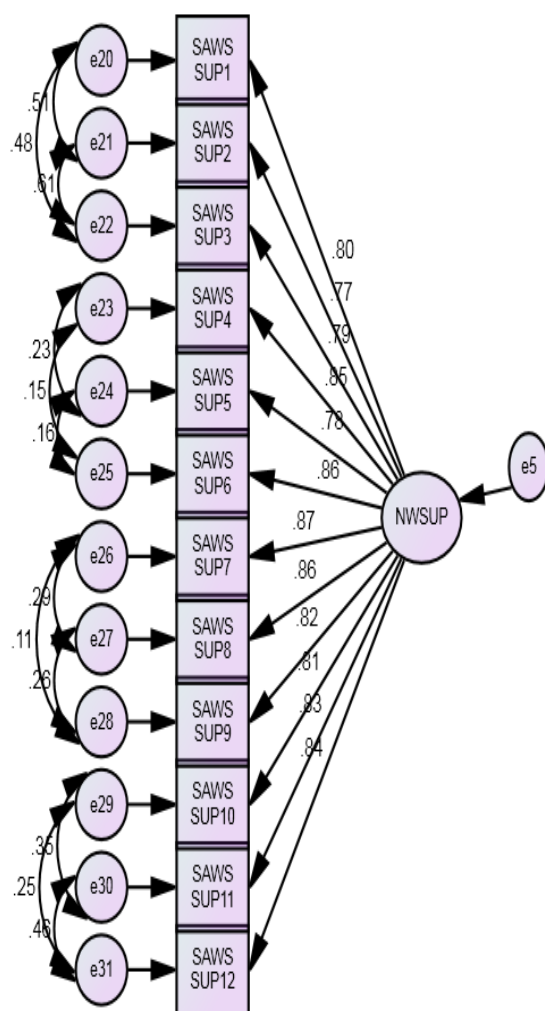


Figure 3.9. Final Non-work Support Measurement Model

Family Support for Work and Non-work Roles Measurement Model

This construct was measured using the Family Support for Work and Non-Work Roles Scale. The final measurement model is shown in Figure 3.10. Initially, two different measurement models were tested: one for family support for work and non-work roles (FSUP1 – FSUP5) and spousal support for non-work roles (SPSUP1 – SPSUP5). The Family Support for Work and Non-work Roles Scale was an adaptation of the Spousal Support for Non-work Roles scale. The items were identical in each scale except for the word “spouse” in the spousal support scale instead of “family.” The final fit indices for these initial measurement models was acceptable (FAMSUP - CFI = .998, RMSEA = .043, CAIC = 122.90; SPSUP - CFI = .995, RMSEA = .06, and CAIC = 146.30). Since the wording in the two scales was so similar, a discriminant validity test was conducted. The Support Appraisal for Work Stressors – Supervisor Scale was included in this test to ensure it was measuring a different construct as well. To demonstrate that these scales do not correlate, attenuation in the correlation due to measurement error must be corrected. The extent to which the three scales overlap can be calculated by using the following formula where r_{xy} is the correlation between x and y, r_{xx} is the reliability of x, and r_{yy} is the reliability of y:

$$\frac{r_{xy}}{\sqrt{r_{xx} * r_{yy}}}$$

Table 3.6 clearly illustrates that discriminate validity does not exist for FAMSUP and SPSUP.

The decision was made to combine these two scales since they appear to be measuring the same

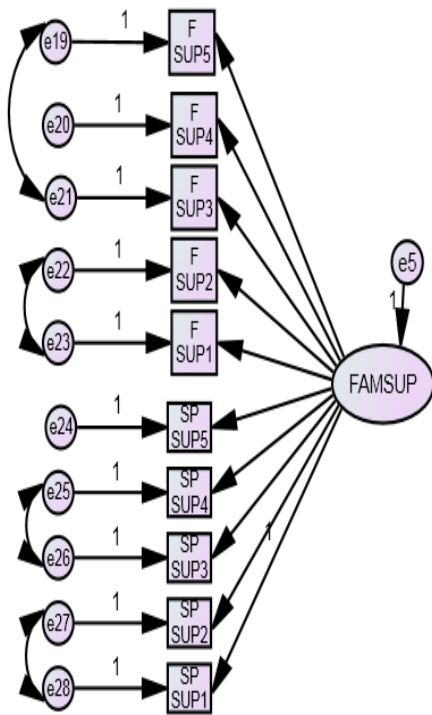


Figure 3.10. Final Family Support Measurement Model

Table 3.6. Discriminant Validity for Family Support, Spousal Support, and Non-work Support Scales

	1	2	3
1. FAMSUP		.81***	.51***
2. SPSUP	.81***		.46***
3. NWSUP	.51***	.46***	

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

construct. The new initial FAMSUP model (FAMSUP and SPSUP combined) produced a CFI = .676 and RMSEA = .264. All standard regression estimates were $> .40$. An examination of the M.I. indices found a high value of 1153.78 for SPSUP1 (*My spouse/partner is very supportive of my participation in the work force*) and SPSUP2 (*My spouse/partner understands that I have to accomplish both work and family duties*). In addition, a high M.I. value of 1084.35 was found for items FSUP1 (*My family is very supportive of my participation in the work force*) and FSUP2 (*My family understands that I have to accomplish both work and family duties*). The error terms for these two sets of indicators were correlated. This resulted in an improved CFI = .811 and RMSEA = .208. This iteration produced a high M.I. Value of 521.63 for items SPSUP3 (*If my job gets very demanding, my spouse/partner usually takes on extra household or child care responsibilities*) and SPSUP5 (*I can depend on my spouse/partner to help me with household or child care responsibilities if I really need it*). In addition, a high M.I. value of 517.49 was found for items FSUP3 (*If my job gets very demanding, my family usually takes on extra household or child care responsibilities*) and FSUP5 (*I can depend on my family to help me with household or*

child care responsibilities if I really need it). After correlating the error terms for these sets of indicators, the resulting CFI = .860 and RMSEA = .184. This iteration produced a high M.I. of 160.05 for items SPSUP3 (*If my job gets very demanding, my spouse/partner usually takes on extra household or child care responsibilities*) and SPSUP4 (*My spouse/partner looks after themselves to reduce my share of household responsibilities*). This resulted in an improved CFI = .849 and a RMSEA = .191. Further correlation of error terms did not result in an improved RMSEA. Since the CFI was at an acceptable level, the decision was made to accept this as the final measurement model and re-evaluate the fit indices in the full measurement model. The final standard regression estimates were all $> .40$ ($p < .001$) and ranged from .53 to .80. The alpha reliability was .92.

Full Measurement Model

Each final measurement model was included in a full measurement model. This model, shown in Figure 3.11, resulted in an acceptable fit with CMin = 16382.54 with 3380 DF ($p = .000$), CFI = .939, and RMSEA = .037. All standard regression weights were $> .40$ and ranged from .38 to .93, ($p < .001$).

Reliability was also tested through the average variance extracted (AVE) which should be $\geq .5$ so that, on average, the measures share at least half of their variation with the latent variable. This is consistent with an alpha coefficient $\geq .7$. As shown in Appendix C, the AVE for each scale was $\geq .5$ and alpha $\geq .7$ for each factor.

The acceptable fit of the model following correlating intra-construct error terms, led to acceptance of the full measurement model. In summary, the regression weights, standard

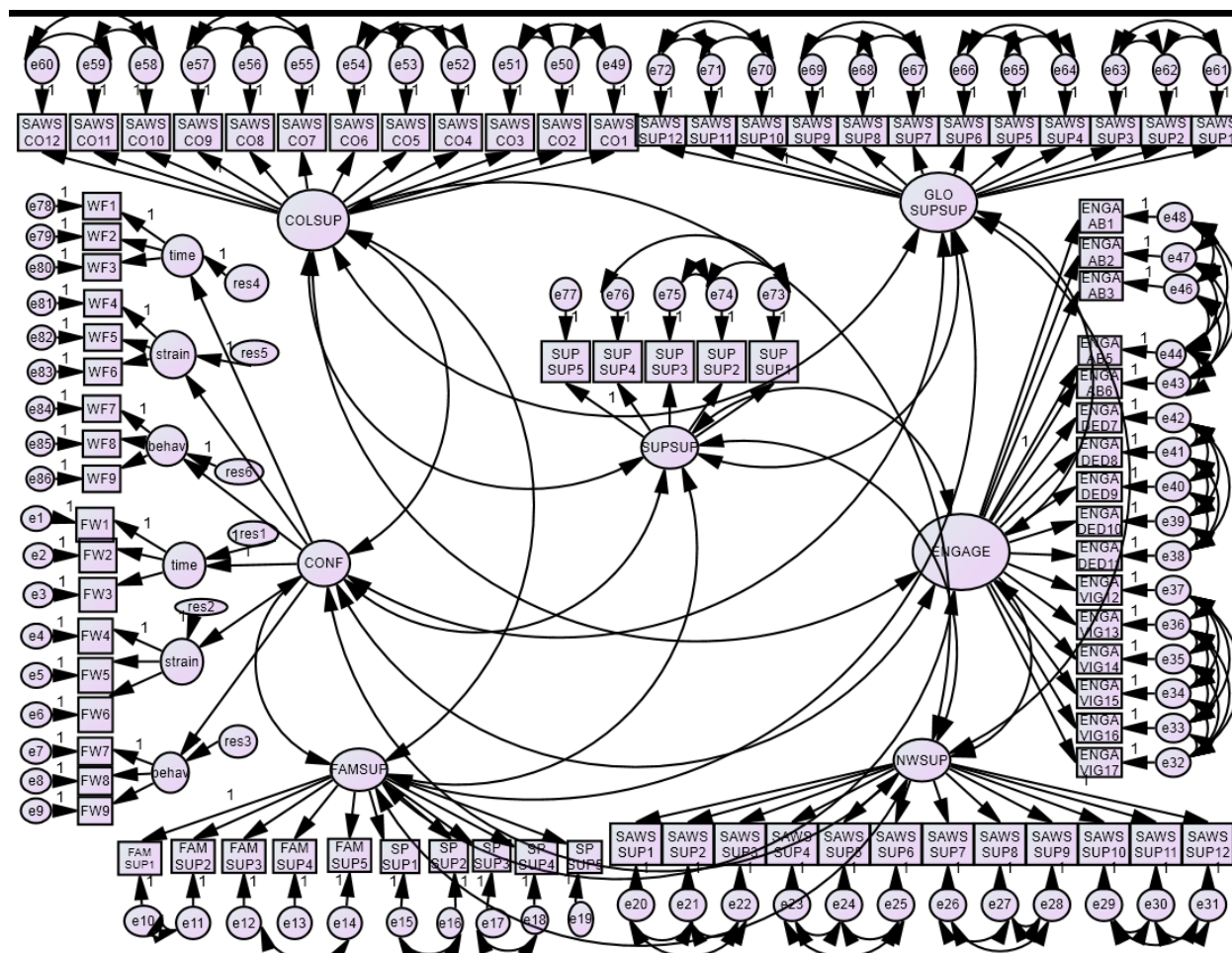


Figure 3.11. Full Measurement Model

regression weights, and correlations of the measurement model were all within acceptable ranges and were significant indicating reliability, convergent validity, and discriminant validity. Finally, the goodness of fit test provided an acceptable fit. Since the measurement model was sound, the structural model could be assessed. It should be noted that a measurement-equivalency test was conducted to determine if there were any differences attributed to the marital status of the participants. No significant differences were found. The full structural model is shown in Figure 3.12.

Modification of Hypotheses

Due to the finding of work-family conflict as a single second order construct, the hypotheses should be revised to represent this new single second order construct consisting of work-family conflict, six second order constructs, and eighteen items. The previous hypotheses which tested for differences between family-work conflict and work-family conflict will now only test work-family conflict (CONF), yet indicators for both constructs remain. From this point forward, it should be understood that the construct “work-family conflict (CONF)” refers to work-family/family-work conflict combined.

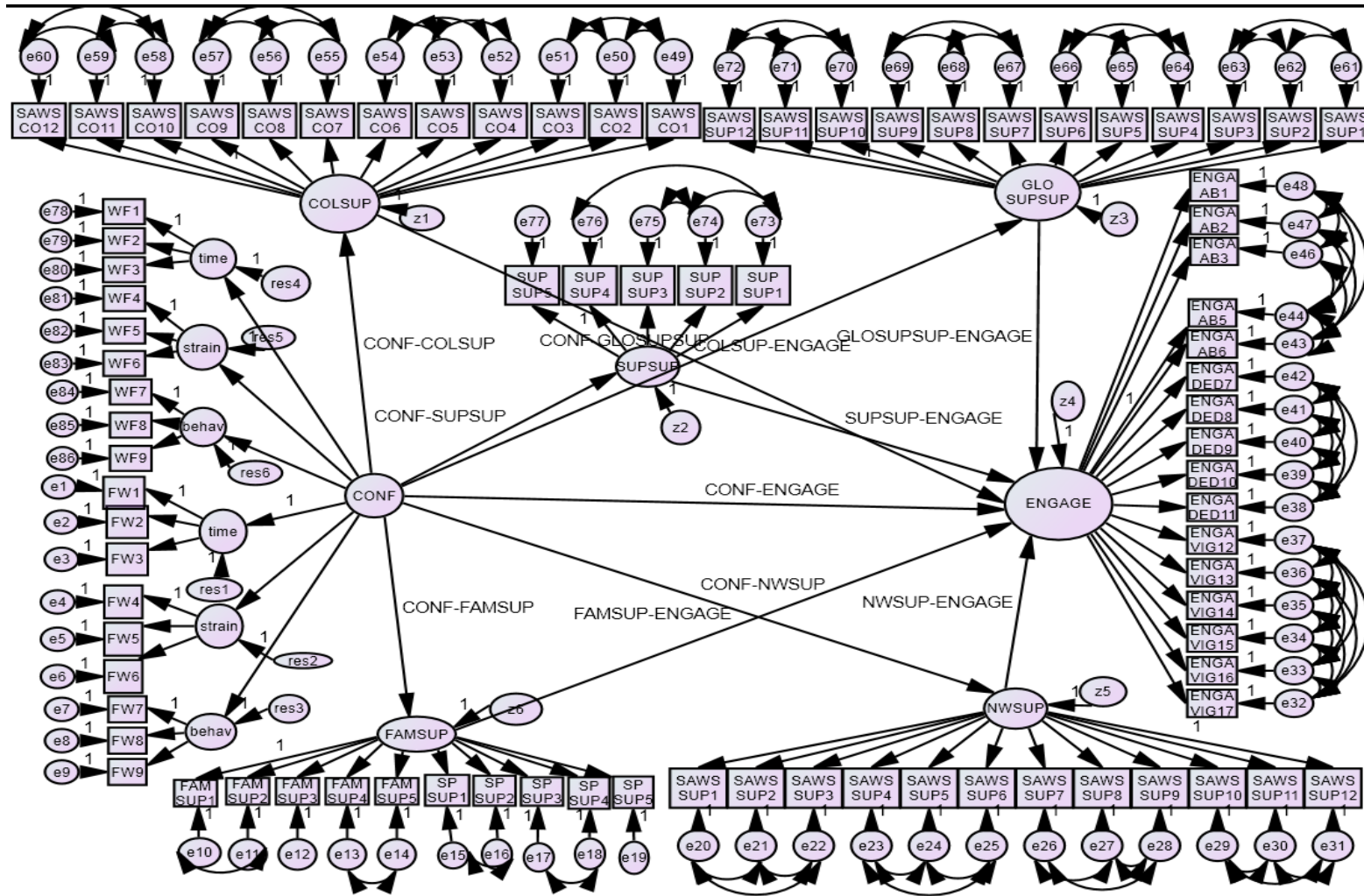
Hypothesis 1: Work-Family conflict (CONF) is negatively related to work engagement outcomes.

Hypothesis 2: Global supervisor support (GLOSUPSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).

Hypothesis 3: Supervisor support for work, personal and family life (SUPSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).

Figure 3.12. Full Structural Model with Legend Page

<i>CONF-ENGAGE:</i>	<i>Work-Family Conflict – Work Engagement</i>
<i>CONF-GLOSUPSUP:</i>	<i>Work-Family Conflict – Global Supervisor Support</i>
<i>CONF-COLSUP:</i>	<i>Work-Family Conflict – Colleague Support</i>
<i>CONF-SUPSUP:</i>	<i>Work-Family Conflict – Supervisor Support for Work, Personal and Family Life</i>
<i>CONF-NWSUP:</i>	<i>Work-Family Conflict – Non-Work Support</i>
<i>CONF-FAMSUP:</i>	<i>Work-Family Conflict – Family Support for Work and Non-Work Roles</i>
<i>COLSUP-ENGAGE:</i>	<i>Colleague Support – Work Engagement</i>
<i>SUPSUP-ENGAGE:</i>	<i>Supervisor Support for Work, Personal and Family Life – Work Engagement</i>
<i>GLOSUP-ENGAGE:</i>	<i>Global Supervisor Support – Work Engagement</i>
<i>FAMSUP-ENGAGE:</i>	<i>Family Support for Work and Non-Work Roles – Work Engagement</i>
<i>NWSUP-ENGAGE:</i>	<i>Non-Work Support – Work Engagement</i>



Hypothesis 4: Colleague support (COLSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).

Hypothesis 5: Family Support (FAMSUP) partially mediates the relationships between work-family conflict (CONF) and employee work engagement (ENGAGE).

Hypothesis 6: Non-work support (NWSUP) partially mediates the relationships between work family conflict (CONF) and employee work engagement (ENGAGE).

Data Analyses

The statistical analysis of this research consisted of descriptive statistics (means, median, mode, alpha, standard deviations, distributions, etc.). Inferential techniques included correlations and structural equation modeling. Hypotheses were tested using correlational analyses and SEM. Correlations test the relationships between constructs. SEM tests direct effects, mediation, and compares the fit of each relationship.

Once the measurement model is sound, the full structural model can be assessed by examining goodness of fit as previously described. The level of significance selected for this study was $p = .05$. Using the accepted measurement models, the structural model for this study consisted of one second-order antecedent construct of work-family conflict (consisting of both WFC/FWC), six first-order antecedent constructs (WFC time, strain, and behavior and FWC time, strain, and behavior), the first-order mediating construct of work support (GLOSUPSUP, COLSUP, and SUPSUP), the first order mediating constructs of non-work support (NWSUP and FAMSUP), and the first-order outcome construct of work engagement (ENGAGE). The full structural model is shown in Figure 3.12. Based upon the fit statistics, it is an adequate-fitting

model: $CM_{\min} = 19,403.39$; $CMIN/df = 5.62$; $CFI = .926$; $RMSEA = .041$; and $CAIC = 21,410.08$. The next step was testing of each hypothesis and evaluating the model.

Summary

The purpose of this study was to determine the direct effect of work-family conflict and family-work conflict on work engagement as well as the mediating effects of work support and non-work support on the relationship between work-family conflict and work engagement. This study employed the use of primary data collected from 2,782 Extension professionals in 46 states. The measurement models were developed using SPSS and AMOS. The results of AMOS testing on the revised six hypotheses in this study will be discussed in Chapter 4.

CHAPTER 4

RESULTS

This chapter will present the findings of this study and will include descriptive statistics, correlational and SEM analyses. Results will be discussed according to each hypothesis.

Descriptive Statistics

Table 4.1 provides the mean, mode, median, standard deviation, range, and Cronbach's alpha coefficient for the instruments used in this research. Table 4.2 presents variable correlations from the measurement model. All of the latent constructs were correlated at the .001 significance level.

Hypothesis Testing Results

Hypotheses were tested using correlational and SEM analyses. Figure 3.12 in Chapter 3 displays the accepted structural model which the SEM analysis is based upon. Initial fit statistics in the default model indicated an adequate fitting model ($CM_{in} = 19,403.39$; $CMIN/df = 5.62$; $CFI = .926$; $RMSEA = .041$; and $CAIC = 21,410.08$). All hypotheses were tested simultaneously using nested models.

Table 4.1 Scales with Mean, Mode, Median, Standard Deviation, Range, and Alpha

Construct	Scale	No. Items	Mean	Mode	Median	Std. Dev.	Range	Cronbach's Alpha
Work Engagement (ENGAGE) (Endogenous)	Work Engagement (Full scale)	17 (1 item deleted)	93.73	89	84.0	12.76	17 – 119	.93
Work-Family Conflict (CONF) (Exogenous)	Work-Interference with Family & Family Interference with Work Scales combined	18	48.51	48	48	10.36	18 - 90	.88
Supervisor Support for Work, Personal, and Family Life (SUPSUP) (Mediator)	Supervisor Support to Manage Work, Personal, and Family Life	5	14.79	15	15	3.32	5 – 20	.91
Global Supervisor Support (GLOSUPSUP) (Mediator)	Support Appraisal for Work Stressors (Direct Supervisor) (Full Scale)	12	33.55	48	35	10.75	12 – 48	.97
Colleague Support-Colleague (COLSUP)	Support Appraisal for Work Stressors Scale (Colleague) (Full scale)	12	36.38	48	36	9.68	12 - 48	.97
Non-Work Support (NWSUP) (Mediator)	Support Appraisal for Work Stressors (Non-work) (Full Scale)	12	39.84	52	41	9.41	12 - 48	.96
Family Support for Work and Non-Work Roles (FAMSUP) (Mediator)	Family Support for Work & Non-Work Roles (FAMSUP)	10	40.68	50	40.68	6.94	10-60	.92

Table 4.2 WFC and WFC, Engagement, and Social Support Mediator Correlations

	1	2	3	4	5	6
1. CONFLICT						
2. ENGAGE	-.380					
3. SUPSUP	-.357	.276				
4. FAMSUP	-.302	.206	.216			
5. GLOSUPSUP	-.307	.318	.756	.203		
6. COLSUP	-.299	.255	.306	.154	.362	
7. NWSUP	-.290	.231	.135	.495	.188	.263

*** Note: All are significant at the $p \leq .001$ level (2-tailed).

The large N of cases ($N = 2,782$) in this study resulted in incredible statistical power. This can create fit statistics which have very marginal differences and therefore make it difficult to find the most parsimonious model (e.g. Byrne, 2010). The fit statistics in large samples can imply very marginal differences, which can mask the results, making it difficult to find the most parsimonious model. Therefore, comparisons cannot adequately be made using the Chi-square statistic. The CFI, RMSEA, and CAIC will be used to make comparisons.

The *All Paths* model in Table 4.3 is the apriori or default model. All paths are unconstrained. Although this model has adequate fit, two of the paths were insignificant: SUPSUP-ENGAGE ($-.036, p = .141$) and FAMSUP-ENGAGE ($.013, p = .565$). Consequently, they need to be removed from the model. All other paths were significant and were therefore retained. Based on the results from the *All Paths* model H3 and H5 are automatically rejected. Once an insignificant path is eliminated, testing for mediation is not possible.

Hypothesis 1

Hypothesis 1 predicted that work-family conflict (CONF) is negatively related to work engagement (ENGAGE). The correlation between work-family conflict (WFC) and work engagement (ENGAGE) was $r = -.380, p \leq .001$, providing support for H1. A handful of studies have noted negative relationships between work-family conflict and work engagement (e.g. Halbesleben, 2011; Halbesleben et al., 2009; Lawrence, 2011; Wilczek-Ruzyczka, Basinska, & Dåderman, 2012). In recent meta-analyses (e.g. Amstad et al., 2011; Byron, 2005; Eby et al., 2005), research has also found negative effects of work-family conflict and its consequences for outcomes such as job satisfaction, absenteeism, and intent to turnover.

Mediation Testing Using SEM

Baron and Kenny's (1986) method of testing for mediation was utilized for hypotheses 2 – 6. As previously stated, to test for mediation, four steps are required:

1. Determine the effect of IV (independent variable) on DV (dependent variable) (direct effect).
2. Determine the effect of IV on the mediator.
3. Determine the effect of the mediator on DV (partial mediating effect).
4. Determine whether the mediator completely mediates the effect of IV on DV (full mediating effect).

In order to confirm findings of partial mediation, complete mediation must be tested and the possibility of its existence eliminated. If the effect of the independent variable is non-significant when the mediator is added, then full mediation has occurred; however, if the effect only shrinks, yet remains significant when the mediator is present, then partial mediation has been demonstrated. This four-step process was performed for each hypotheses involving mediation.

Based on James et al.'s. (1982) condition 9 requirement that all paths must be practically and statistically significant, in addition to the insignificant paths in the *Allpaths* model (i.e. FAMSUP-ENGAGE, and SUPSUP-ENGAGE), partial mediation will only be tested for three constructs: global supervisor support, colleague support and non-work support. Specifically, the following relationships will be tested: (1) global supervisor support partially mediates work-family conflict and work engagement (i.e. H2); (2) colleague support partially mediates work-family conflict and work engagement (i.e. H4); and (3) non-work support partially mediates

work-family conflict and work engagement (i.e. H6). Additionally, complete mediation will be tested for the global supervisor support, colleague support, and non-work support constructs. Specifically, the following relationships will be tested: (1) global supervisor support completely mediates work family conflict and work-engagement (i.e. H2); (2) colleague support completely mediates work-family conflict and work engagement (i.e. H4); and (3) non-work support completely mediates work-family conflict and work engagement (i.e. H6).

Discussion of Hypotheses 2 – 6

Hypothesis 2. Hypothesis 2 predicted that global supervisor support (GLOSUPSUP) partially mediates the relationship between work-family conflict (CONF) and work engagement (ENGAGE). The first step in testing for partial mediation is to test the direct effect between work-family conflict and work engagement. This path was found significant in the *Allpaths* model. The standardized path weight for the CONF-ENGAGE path was $-.355, p < .001$, demonstrating that a strong direct effect exists, and providing initial support for this hypothesis. The negative effect was an expected finding since conflict is generally negatively related to positive outcomes such as work engagement (e.g. Ford et al., 2007; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002).

For the partial mediation test, global supervisor support (GLOSUPSUP) was tested as a partial mediator of work-family conflict (CONF) and work engagement (ENGAGE). The partial mediation test provided acceptable fit indices (see Table 4.3) and the standardized estimates for CONF-ENGAGE ($-.311, p = .001$), CONF-GLOSUPSUP ($-.306, p = .001$), and GLOSUPSUP-ENGAGE ($.222, p = .001$) paths were significant.

Therefore, global supervisor partially mediates the relationship between work-family conflict and work engagement. While there was an unexpected inverse relationship between CONF-GLOSUPSUP, the positive GLOSUPSUP-ENGAGE path was an expected finding. There is no existing research that has examined the work-family conflict, global supervisor support, and work engagement mediation relationship specifically, but numerous studies have highlighted the mediating effects of supervisor and colleague support in terms of work-family conflict (e.g. Aryee et al., 1999; Cohen et al., 1998; Halpern, 2005; Hill, 2005; Kelloway et al., 1999; Parsuraman & Greenhaus, 2002; Tatum, 2001). Empirical research has consistently demonstrated that social support from supervisors is a predictor for work engagement (e.g. Adams et al., 1996; Bakker, Albrecht, & Leiter, 2011b; Greenhaus & Powell, 2006; Halbesleben, 2006; Halbesleben, 2009; Thomas & Ganster, 1995).

Although partial mediation was found for this hypothesis, complete mediation was also tested to ensure that a better fitting model did not exist. To test for complete mediation, the WFC-ENGAGE path was constrained to zero to remove the direct effect of work-family conflict on engagement. Complete mediation exists when the second model fits as well as, or better than the default model, and tested paths are significant and not equal to zero. Also shown in Table 4.3, the complete mediation test provided acceptable fit and the standardized estimates for the CONF-GLOSUPSUP ($-.307, p = .001$) and GLOSUPSUP-ENGAGE ($.319, p = .001$) paths were significant, providing initial support for complete mediation. However, the CMin, CFI, RMSEA, and CAIC statistics were lower for the partial mediation test than the complete mediation test. Additionally, the difference in chi-square values between the partial and complete mediation tests was examined (smaller numbers indicate acceptance of the hypothesis). Nested model

comparisons found differences in chi-squared values of 181.60, $p = .000$, indicating a rejection of complete mediation and support for partial mediation. Therefore it can be concluded that there is a stronger partial mediation relationship between work-family conflict, global supervisor support, and work engagement than complete mediation relationship (Byrne, 2010), providing support for hypothesis 2.

Hypothesis 3. Hypothesis 3 predicted that supervisor support for work, personal, and family life (SUPSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE). As noted previously in the *Allpaths* model, this hypothesis could not be tested for any type of mediation due to the insignificant SUPSUP-ENGAGE path. Therefore, it cannot be concluded that supervisor support for work, personal, and family life (SUPSUP) partially mediates the relationship between family-work conflict (CONF) and work engagement (ENGAGE) and H3 must be rejected. This is an unexpected finding since researchers have argued that support is an important resource that helps to alleviate stress and burnout which can ultimately lead to higher levels of engagement. Past research has highlighted the positive mediating effects of supervisors in terms of work-family conflict (e.g. Aryee et al., 1999; Cohen et al., 1998; Halpern, 2005; Hill, 2005; Karatepe & Kilic, 2007; Kelloway et al., 1999; Parsuraman & Greenhaus, 2002; Tatum, 2001; Valcour, Ollier-Malaterre, Matz-Costa, Pitt-Catsoupes, & Brown, 2011; Xanthopoulou et al., 2009).

Hypothesis 4. Hypothesis 4 predicted that colleague support (COLSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE). As noted previously, the direct effect test of the CONF-ENGAGE paths was found significant in the *Allpaths* model.

For the partial mediation test, colleague support (COLSUP) was tested as a partial mediator of work-family conflict (CONF) and work engagement (ENGAGE). The partial mediation test provided acceptable fit indices (see Table 4.3) and the standardized estimates for CONF-ENGAGE ($-.329, p = .001$), CONF-COLSUP ($-.298, p = .001$), and COLSUP-ENGAGE ($.157, p = .001$). Past studies have found mixed results. While no specific studies exist examining the work-family conflict, colleague support, and work engagement mediating relationship, a handful of studies have reported significant negative correlations between coworker support and work-family conflict (e.g. Bernard & Phillips, 2007; Carlson & Perrewe, 1999; van Daalen et al., 2006) while others have reported weak or even non-significant correlations with work-family conflict (e.g. Beehr et al., 2000; Frone et al., 1997; Greenberger et al., 1989).

Although partial mediation was found for this hypothesis, complete mediation was also tested to ensure that a better fitting model did not exist. To test for complete mediation, the WFC-ENGAGE path was constrained to zero to remove the direct effect of work-family conflict on engagement. Complete mediation exists when the second model fits as well as, or better than the default model, and tested paths are significant and not equal to zero. Also shown in Table 4.3, the complete mediation test provided acceptable fit and significant standardized estimates for the CONF-COLSUP ($-.299, p = .001$) and COLSUP-ENGAGE ($.258, p = .001$) paths, providing initial support for complete mediation. However, the CMin, CFI, RMSEA, and CAIC statistics were lower for the partial mediation test than the complete mediation test. Additionally, nested model comparisons found differences in chi-square values between the partial and complete mediation tests (smaller numbers indicate acceptance of the hypothesis). The difference in chi-squared values was 199.63, $p = .000$, indicating a rejection of complete mediation and

support for partial mediation. Therefore it can be concluded that there is a stronger partial mediation relationship between work-family conflict, colleague support, and work engagement than complete mediation relationship (Byrne, 2010), providing support for hypothesis 4.

Hypothesis 5. Hypothesis 5 predicted that family support for work and non-work roles (FAMSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE). As previously mentioned, this hypothesis could not be tested for partial nor complete mediation due to the insignificant path FAMSUP-ENGAGE (.013, $p = .565$) path. Therefore, H5 was rejected.

This finding was unexpected. While no studies exist examining the specific relationship between CONF-FAMSUP-ENGAGE, non-work social support such as family support for work and non-work roles has been found to be a significant resource in mediating work-family conflict/family-work conflict with related outcomes such as life satisfaction and job satisfaction (e.g. Aryee et al., 1999; Blanton & Morris, 1999; Burke et al., 1980; Byron, 2005).

Hypothesis 6. Hypothesis 6 predicted that non-work support (NWSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE). As previously discussed in the *Allpaths* model, the CONF-ENGAGE path was significant providing a direct effect relationship. As shown in Table 4.3, the partial mediation test provided acceptable fit indices and significant standardized estimates for the CONF-ENGAGE ($-.338$, $p = .001$), CONF-NWSUP ($-.290$, $p = .001$), and NWSUP-ENGAGE ($.133$, $p = .001$) paths, providing support for H6. Therefore, it can be concluded that the relationship between work-family conflict and work engagement was partially mediated by non-work support.

Table 4.3 Structural Model Work/Family Conflict and Work Engagement Goodness of Fit

Model	Df	Chi-Sq.	P	RMSEA ¹	PCLOSE	CFI ²	CAIC ³	Δ CMIN (<i>p</i>) from Default ^
Default (All Paths)	3390	19,043.38	.000	.041	1.00	.926	21,410.08	-----
Partial Mediation H2	3398	20,349.01	.000	.042	1.00	.920	22,644.26	1305.63 (.000)
Complete Mediation H2	3399	20,530.62	.000	.043	1.00	.919	22,816.93	1487.23 (.000)
Complete Mediation H3	3399	20,537.32	.000	.043	1.00	.919	22,823.64	1493.94 (.000)
Partial Mediation H4	3398	20,430.48	.000	.042	1.00	.919	22,725.73	1387.09 (.000)
Complete Mediation H4	3399	20,630.11	.000	.043	1.00	.919	22,916.43	1586.73 (.000)
Complete Mediation H5	3399	20,695.88	.000	.043	1.00	.918	22,982.19	1652.49 (.000)
Partial Mediation H6	3398	20,464.21	.000	.042	1.00	.919	22,759.46	1420.83 (.000)
Complete Mediation H6	3399	20,673.22	.000	.043	1.00	.918	22,959.54	1629.83 (.000)

¹ <.05 = very good, < .08 = acceptable, <.10 = mediocre, \geq .10 = poor (Byrne, 2010)

² .90 - .94 = good fit, \geq .95 = very good fit (Byrne, 2010)

³ Smaller values indicate better fitting models (Hu & Bentler, 1995)

This finding was expected. As noted in H1a, although these specific relationships have not been found in the literature, negative relationships have been found for similar outcomes such as job satisfaction (e.g. Gipson-Jones, 2005; Lambert, 2006; Netemeyer, 1996; Daves, 2002; O'Driscoll, 1992; Greenhaus, 1985; Boles, 2001; Carlson, 1999; Bedeian, 1988; Frye, 2004) and organizational commitment (e.g. Lambert, 2006; Thompson, 1999; Daves, 2002; Greenhaus, 1985).

Although the partial mediation test for H6 was accepted, another mediation test was conducted to ensure that complete mediation was not present. To test for complete mediation, the WFC-ENGAGE path was constrained to zero to remove the direct effect of work-family conflict on engagement. As shown in Table 4.3, the complete mediation test provided acceptable fit and the standardized estimates for CONF-NWSUP ($-.292, p = .001$) and NWSUP-ENGAGE ($.235, p = .001$) paths. However, the CMin, CFI, RMSEA, and CAIC statistics were lower for the partial mediation test than the complete mediation. Additionally, the nested model comparison test found differences in chi-square values between the partial and complete mediation tests (smaller numbers indicate acceptance of the hypothesis). The difference in chi-squared values was $209.01, p = .000$, indicating a rejection of complete mediation and support for partial mediation. It can be concluded that there is a stronger partial mediation relationship between work-family conflict, non-work support, and work engagement than a completely mediating relationship.

Final Model Confirmation Using Jackknife Testing

The last step in this data analysis was to test the final structural model by removing the insignificant paths noted in the hypothesis results. The large N of cases ($N = 2,782$) in this study

produced tremendous statistical power. The fit statistics in large samples can imply very marginal differences, which can mask the results, making it difficult to find the most parsimonious model. This can make most condition-10 tests inappropriate (i.e. paths which should be equal to zero are in fact, zero (e.g. Byrne, 2010). To relieve concerns regarding condition 10 (paths predicted to be equal to approximately zero, are zero), the jackknife test was used. The jackknife systematically constrains individual insignificant paths to zero to test for model worsening (James et al., 1982). A nested model comparison was used. Increasing differences in chi-square and higher CAIC values are indicative of paths which are not equal to zero and are therefore necessary for inclusion in the model (Wu, 1986).

The results of the jackknife test shown in Table 4.4 confirm earlier findings of the SUPSUP-ENGAGE and FAMSUP-ENGAGE paths that failed to be significantly different from the default model. Two iterations of the jackknife test were performed. The iteration for jackknife 1 (FAMSUP-ENGAGE = 0) indicates that the FAMSUP-ENGAGE path should be removed from the model. Fit statistics for this model (CMin = 19,043.67, df = 3391, CFI = .926, RMSEA = .041, and CAIC = 22,401.44) are indicative of a better fitting model than the original structural model (Figure 3.11). Likewise, the iteration for jackknife 2 (SUPSUP-ENGAGE = 0) indicates that the SUPSUP-ENGAGE path should be removed from the model. Fit statistics for this model (CMin = 19,044.85, df = 3392, CFI = .926, RMSEA = .041, and CAIC = 21,402.62) were indicative of a better fitting model than the original structural model. Since there was not a significant difference in these chi-square values, it can be concluded that the models are statistically the same and that the FAMSUP-ENGAGE and SUPSUP-ENGAGE paths need to be

Table 4.4 Model Confirmation using the Jackknife Technique – Initial Structural Model

Model Tested	CMin (df)	CFI	RMSEA CAIC	ΔCMin (<i>p</i>) From Default[^]
All Paths (Default Model - all paths freely estimated)	19,043.38*** (3390)	.926	.041 21,410.08	---
Jackknife 1 (FAMSUP-ENGAGE=0)	19,043.67*** (3391)	.926	.041 22401.44	.291 (.589)
Jackknife 2 (SUPSUP-ENGAGE=0)	19,044.85*** (3392)	.926	.041 21,402.62	1.46 (.226)

[^]CMin difference tests

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Table 4.5 Model Confirmation using the Jackknife Technique – Final Structural Model

Model Tested	CMin (df)	CFI	RMSEA CAIC	ΔCMin (<i>p</i>) From Default[^]
Revised All Paths (all paths freely estimated)	19,043.38*** (3390)	.926	.041 21,410.08	
Final Model (FAMSUP-ENGAGE and SUPSUP-ENGAGE removed)	19,045.13*** (3392)	.926	.041 21,393.97	1.75 (.000)

[^]CMin difference tests

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

removed from the model. Removing these paths provides a more parsimonious model. This confirms the results from all hypotheses.

A second jackknife test was conducted to confirm the removal of these paths. The final model fit statistics shown in Table 4.5 confirm that the final model which excludes the previously discussed paths is a more parsimonious model than the original *Allpaths* model. The fit statistics are acceptable for both the *Allpaths* model and the final model; however, the CAIC statistic was slightly lower for the final model (21,393.97 vs. 21,410.08). As shown in Figure 4.1, the path diagram illustrates the finding that the FAMSUP-ENGAGE and the SUPSUP-ENGAGE paths were not necessary. The final structural model with coefficients is shown in Figure 4.2. By removing the insignificant paths (FAMSUP-ENGAGE and SUPSUP-ENGAGE), Condition 9, which states that paths that should be nonzero, are in fact, different from zero, was satisfied. The final jackknife test satisfied Condition 10 in that the removal of these insignificant paths during each iteration did not worsen the model fit statistics substantially (James et al., 1982).

The final structural model (Figure 4.2) removed the paths FAMSUP-ENGAGE and SUPSUP-ENGAGE. The fit statistics in this model were better in comparison to the original model (CMIN = 19,045.13; df = 3392; CFI = .926; RMSEA = .041; and CAIC = 21,393.97 versus CMIN = 19,043.38; df = 3390; CFI = .926; RMSEA = .041; and CAIC = 21,410.08). Table 4.6 shows a summary of the hypotheses results. Chapter 5 will discuss the conclusions, potential limitations of the study and future directions for researchers.

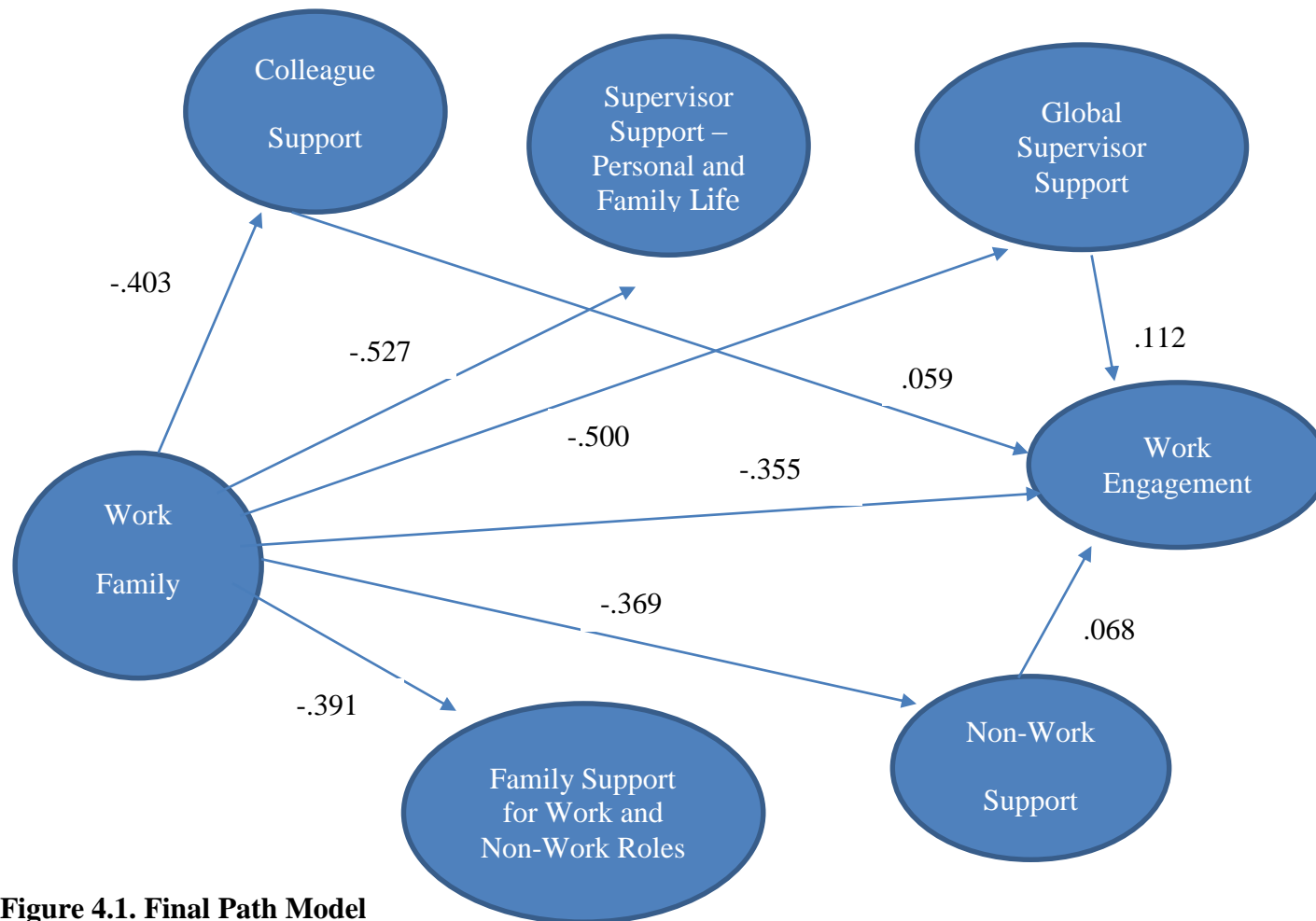


Figure 4.1. Final Path Model

Figure 4.2 Final Structural Model with Path Weights Legend Page

CONF-ENGAGE: -.346
COLSUP-ENGAGE: .059
GLOSUPSUP-ENGAGE = .112
NWSUP-ENGAGE: .068
CONF-GLOSUPSUP: -.500
CONF-COLSUP: -.403
CONF-NWSUP: -.369
CONF-FAMSUP: -.391

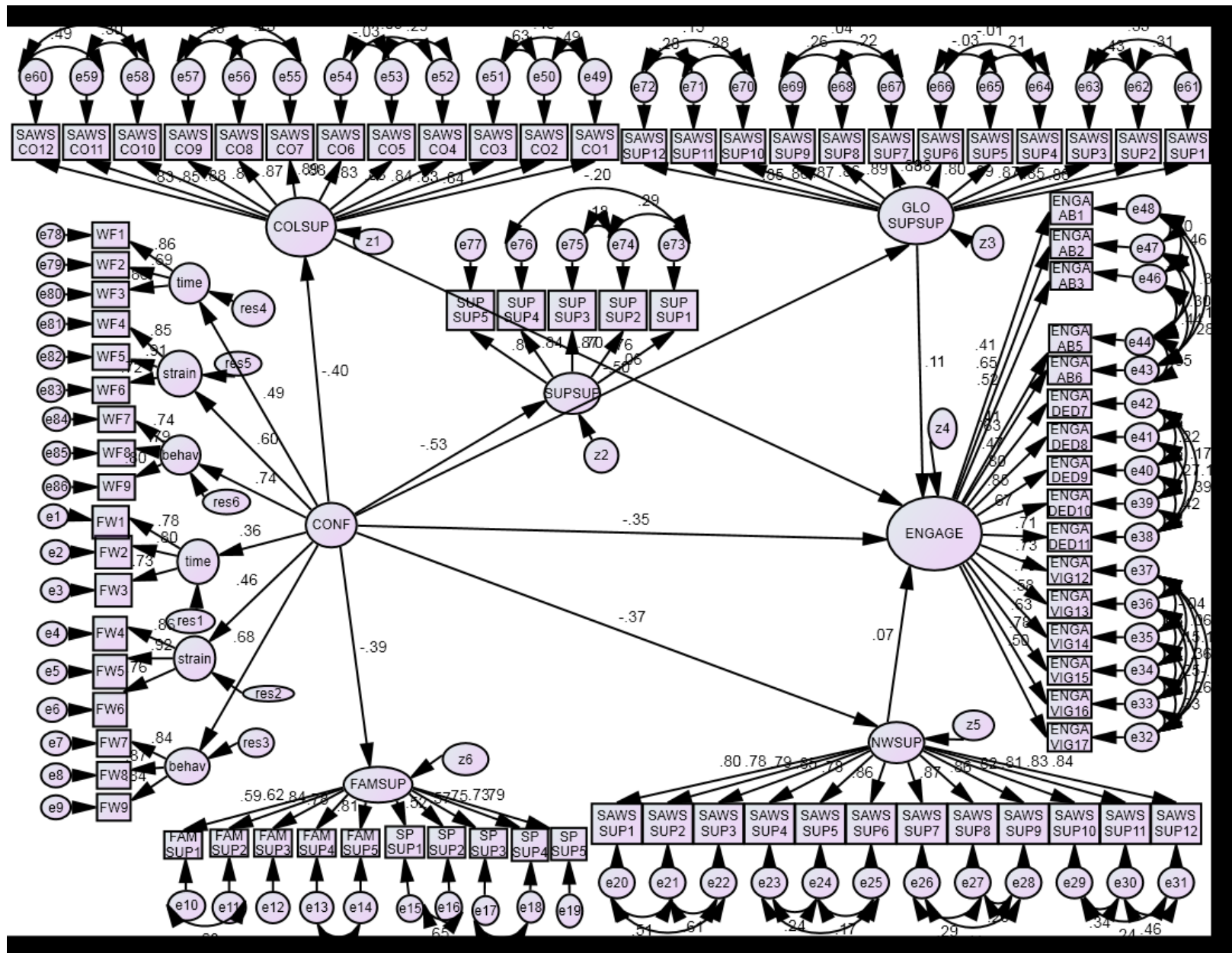


Table 4.6 Summary of Hypotheses Results

	Hypothesis	Result
H1	Work/Family conflict (CONF) is negatively related to employee work engagement.	Supported
H2	Global Supervisor Support (GLOSUPSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).	Supported
H3	Supervisor Support for work, personal and family life (SUPSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).	Not Supported
H4	Colleague Support (COLSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).	Supported
H5	Family support for work and non-work roles (FAMSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).	Not Supported
H6	Non-work support (NWSUP) partially mediates the relationship between work-family conflict (CONF) and employee work engagement (ENGAGE).	Supported

Summary

Table 4.6 shows the results of the final hypotheses in this study. Four (4) of the six (6) original hypotheses were supported. Complete mediation was tested for hypotheses 2, 4, and 6. There was a stronger partial mediation relationship than complete mediation relationship for each of these hypotheses. Regarding directions of relationships (i.e. positive/negative) the model behaved as expected except for the inverse relationship between work-family conflict and each of the mediators. However, the paths from the mediators to work engagement were all positive, which was expected.

CHAPTER 5 – DISCUSSION

Conclusions

The last 40 years have brought a steady increase in research within the work-family field. What was initially regarded as a family studies research area has more recently overlapped with other disciplines including management, industrial-organizational psychology, health, and economics. While there has been a prolific amount of research in the work-family field in a broad sense, the volume of empirical research examining the specific relationship between work-family conflict and work engagement has begun to expand only in the last 10 years (e.g. Halbesleben et al., 2009; Halbesleben, 2009; Mauno et al., 2007; Sonnentag, 2011; ten Brummelhuis et al., 2010). Additionally, research examining this relationship within the Extension occupational group is almost non-existent.

This study utilized stress theory to explore the effects of work-family conflict and family-work conflict upon the work engagement outcomes of Extension employees. The study tested a sample of 2,782 full time Extension professionals employed by land grant institutions in 46 states. The structural equation modeling analytic technique was used to examine the relationship between work-family conflict and work engagement, as well as the mediating effects of work and non-work available social support. Results revealed current needs of this occupational group and their struggle with work and family conflict, particularly as it affects work engagement. This study examined the interrelationships between work-family conflict, perceived available support from work and non-work areas, and work engagement. Perceived available support from the work domain (i.e. supervisors and colleagues) and the non-work domain (i.e. spouse, family, and

friends) were hypothesized to partially mediate the relationship between work-family conflict/family-work conflict and work engagement.

Findings

The current study had several important findings. This chapter will begin with some noteworthy comparisons of the means to the general population, and a discussion of unexpected directionality from the SEM analyses will follow. The findings of each hypothesis will be discussed in the research questions section including the empirical testing of the SEM models. Finally, the limitations, and implications for research, theory, and practice will be presented. Before proceeding, a brief discussion of the means is prudent.

Due to some of the unexpected outcomes in this study, the following discussion of the means is included in order to compare and contrast the Extension employee population with other occupational populations. The means for several of the scales were very different from other occupational populations while other means were very similar.

Regarding the mean for both Work-Family Conflict and Family Work Conflict, scales ($\bar{x} = 48.51$) was mid-range (“neutral”) indicating that Extension professionals neither agree nor disagree that their work conflicts with their family. The work-family conflict domain mean was mid-range (“neutral”) ($\bar{x} = 27.88$) and the family-work conflict domain was “slightly disagree” ($\bar{x} = 20.62$).

The overall mean for the Work Engagement (ENGAGE) Scale was high range ($\bar{x} = 93.73$). Of the participants, 52.3 % were very often or always engaged, 45.8 % were sometimes/often engaged, and 1.9% were rarely/almost never engaged, indicating that the majority of Extension professionals have high levels of work engagement. Interesting

comparisons may be made with the work engagement levels in this study and the 2012 Towers Watson Global Workforce study, which included over 32,000 employees from multiple industries around the world. The Towers Watson research indicated a staggering 65% of employees are not highly engaged. Their study used a different engagement scale (Watson, 2012) and the means are not available, but close comparisons can be made to the current study around percentages. Participants were categorized into four distinct segments: 35% highly engaged (those who scored high on all three aspects of engagement); 22% unsupported (traditionally engaged, but lack support/energy); 17% detached (individuals who have support/energy, but lack traditional engagement) and 26% disengaged (those who scored low on all three aspects of engagement). Previous empirical research over the last 10 years has indicated similar findings (e.g. BlessingWhite, 2011; *Corporate Leadership Council employee engagement survey 2004*, 2004; Harter et al., 2002b). The engagement level from this current study is a positive finding for Extension organizations, yet contrary to the majority of the remaining population. The Extension profession is not unlike other “helping” occupations such as clergy, medical professionals, and educators in that they tend to regard their work as a “calling.” Research has demonstrated that when work is experienced as a “calling” individuals’ level of health, life (Busteed & Lopez, 2013), and job satisfaction increases (Berg, Grant, & Johnson, 2010). Similarly, studies have shown that employees working in the non-profit sector, such as Extension, tend to have higher levels of work engagement than those in for-profit sectors (Perrin, 2003).

Regarding the perceived available support levels from the *work domain*, the overall mean ($\bar{x} = 36.38$) for support appraisal for work stressors – colleague (for colleague support construct)

was mid to high-range (“somewhat” to “very much”) suggesting that Extension employees have some level of coworker support for stressors at work. The mean ($\bar{x} = 33.55$) for support appraisal for work stressors – supervisor (for global supervisor support construct) was mid- range (“somewhat”) which indicates that this group of employees feels some level of general support from their supervisors for work stressors. The overall mean ($\bar{x} = 25.98$) for supervisor support for work, personal and family life tended to be mid to high-range (“agree” to “strongly agree”).

Regarding the perceived levels of available support from the *non-work domain*, the mean ($\bar{x} = 40.68$) for family support for work and non-work roles (for family support for work and non-work roles construct) was mid to high-range (“agree” to “strongly agree”) Similarly, the mean ($\bar{x} = 39.84$) for support appraisal for work stressors – non-work (for non-work support construct) was mid-range to high (“somewhat” to “very much”). This may indicate that either 1) support from the non-work domain assists this occupational group in balancing their work and non-work roles or 2) non-work support is necessary to compensate for support levels that do not exist in the work domain. The available *non-work* support levels for this sample of Extension professionals are similar to other populations.

While a discussion of the means is normally reserved for the results section of research, comparing the similarities and differences between the Extension occupational population and other occupational populations was important to include here in order to better understand some of the unexpected findings. This discussion also provides support for the examination of the research questions in this study which now follows.

Discussion of Research Questions

A brief discussion of the correlational findings as well as the paths which behaved unexpectedly is warranted here to frame the subsequent discussion of research questions.

The data in this study fully supported 33% of the hypotheses and partially supported 17%. The significant inverse correlation between work-family conflict and work engagement ($r = -.380, p \leq .001$) confirmed H1. This was expected, given numerous meta-analyses demonstrating similar results (Amstad et al., 2011; Byron, 2005; Eby et al., 2005).

Concerning the directions of paths, five of the nine paths behaved unexpectedly. The paths (see Figure 4.1) from work-family conflict to all of the mediators had an inverse effect, which was unexpected when one considers that past research has supported a positive effect between work-family conflict and work domain support (Bhave, Kramer, & Glomb, 2010; Byron, 2005; Kelloway et al., 1999; Kossek, Pichler, et al., 2011; Lawrence et al., 2007; Parasuraman et al., 1992; Tatum, 2001) and non-work domain support (Aryee et al., 1999; Blanton & Morris, 1999; Byron, 2005; Grzywacz et al., 2008). Consequently, as work-family conflict increased for employees, their support levels decreased in both the work and non-work domains. One reason this may have occurred is the mid-range level of work-family conflict ($\bar{x} = 27.88$) and the low-range level of family-work conflict ($\bar{x} = 20.62$). It was interesting to find that the overall level of work-family conflict for this Extension population was much lower than other occupational populations (e.g. Carlson et al., 2000; Gutek, Repetti, & Silver, 1988; Judge, Boudreau, & Bretz, 1994; Matthews et al., 2010; McMillan, 2011b; Netemeyer, Boles, & McMurrian, 1996; Odle-Dusseau, Britt, & Greene-Shortridge, 2012). Extension employees may not feel the need for support from either the work or non-work domains. Extension employees

may be engaging in *job crafting*, a term used to describe how employees physically and cognitively redesign their jobs to foster job satisfaction, engagement, and productivity at work. Job crafters can redesign their job by 1) altering the boundaries by taking on more or fewer tasks or changing the way they perform their tasks; 2) altering their social interactions at work; and/or 3) altering how they perceive or think about their tasks (Bakker et al., 2012; Tims, Bakker, & Derks, 2012).

The possibility exists, although not tested in this study, that these inverse paths, as well as the insignificant SUPSUP-ENGAGE and FAMSUP-ENGAGE paths were moderated by parental status, the age of the participants, and the age of the children living at home. As noted in Chapter 3, nearly half of the sample (48.2%, $n = 1,340$) had at least one child living at home. Almost half (48%) of the participants ($n = 1,344$) had parental status while 52% (1,442) had non-parental status. Of those who had children living at home, 52.6% ($n = 705$) were between the ages of 11 – 18, 35.1% ($n = 471$) were between the ages 5 – 10, 21.4% ($n = 287$) ages 1 – 4; and 7.5% ($n = 100$) under age 1. Although moderating effects were not tested in this study, previous research has found that employees with children living at home, particularly younger children, tend to experience higher levels of work-family conflict and require higher levels of social support for the work and non-work domains (Greenhaus & Beutell, 1985; Greenhaus & Kopelman, 1981; Li & Bagger, 2011; Narayanan & Savarimuthu, 2013; Pleck, 1977). Similarly, as noted in Chapter 3, over half of the participants or 51.7% ($n = 1,439$) were between the ages of 43 – 56. Typically those in this age range would not have small children which would, therefore, reduce their work-family conflict and consequently their need for work and non-work domain support.

Although not examined in this study, another potential reason for this finding is that “work-family backlash” may be present in this study. That is to say, childless employees may feel penalized at work when they are required to increase their work hours to compensate for colleagues with parental responsibilities leaving work. They may also view the organization’s work-family benefits as inequitable or even discriminatory since they do not use them (Parker & Allen, 2001; Young, 1999). The supervisor support for work, personal and family life may have resulted in a work-family backlash effect for individuals with low work-family conflict who did not need or use this type of work support. Employees who need a lower level of this type of *family facilitative* supervisor support, such as single individuals or individuals without children, may feel that they do not directly benefit from the support and may even perceive it as unfair (e.g. Grover, 1991; Hammer et al., 2011; Parker & Allen, 2001; Thompson, Beauvais, & Allen, 2006).

The structural equation model introduced in Chapter 3 and tested in Chapter 4 was designed to test five of the six revised hypotheses. The research questions of this study will lead the discussion of hypotheses 2– 6.

Research Question 1: How do various dimensions of work-family conflict affect employee work engagement?

This question was directly addressed in the structural equation model direct effects testing for hypothesis 1. Work-family conflict had an inverse direct effect with work engagement with the standardized path weight for the CONF-ENGAGE path ($-.355, p < .001$), which was expected. Extension professionals in this sample are very similar to other populations examined

in recent meta-analyses (e.g. Amstad et al., 2011; Byron, 2005; Eby et al., 2005) in that as work-family conflict increases, work outcomes such as work engagement decrease.

This study reinforces previous empirical findings that work and family are not two separate domains, as suggested by Kanter (1977) and Pleck (1977). In contrast to previous research, which has operationalized work-family conflict and family-work conflict as two separate second order constructs, this study found the better fitting measurement model as a single, second order construct which includes six second order constructs of work-family conflict time, strain, and behavior and family-work conflict time, strain, and behavior. Thus the bi-directionality of the constructs are maintained, as suggested by Frone (1997). This new construct recognizes that employees are not always able to discern whether the cause of their conflict is work-family or family-work and supports Frone et al's. (1992) contention that individuals have difficulty separating out their work and family roles.

Research Question 2: How do the dimensions of work support and non-work support mediate the relationship between work-family/family-work conflict and work engagement?

The *Work support* dimension was tested in this study using three mediator constructs: 1) global supervisor support; 2) supervisor support for work, personal and family life; and 3) colleague support. The *Non-work support* dimension was tested in this study by using two constructs: 1) non-work support and 2) family support for work and non-work roles. Hypotheses 2–4 addressed the work support mediators and hypotheses 5–6 addressed the non-work support mediators.

Hypothesis 2. Hypothesis 2, which tested the mediating effects of global supervisor support between work-family conflict and work engagement was supported. Numerous studies have demonstrated the mediating effects of supervisor support between work family/family-work

conflict and work outcomes such as work engagement (e.g. Bakker et al., 2008; Hakanena et al., 2008; Macey & Schneider, 2008). The final stage of mediation testing found a stronger partial mediation relationship than complete mediation.

Hypothesis 3. Hypothesis 3, which tested the mediating effects of supervisor support for work, personal and family life between work-family conflict and work engagement, was rejected due to their insignificant path in the *All paths* model. Therefore this hypothesis could not be tested for any type of mediation. This finding was unexpected. The use of *work-family facilitative* supervisor support measures such as supervisor support for work, personal and family life tend to be more predictive of work outcomes than more *general* or *global* measures. A recent meta-analysis (Kossek, Pichler, et al., 2011) drawing on 115 samples from 85 studies with 72,507 employees found that work-family specific support from both supervisors and the organization have a stronger positive relationship with work-family conflict than general supervisor support and organization support.

Hypothesis 4. Hypothesis 4, which tested the mediating effects of global colleague support between work-family conflict and work engagement, was supported. Numerous studies have found significant effects between coworker support and work-family conflict (e.g. Bernard & Phillips, 2007; Carlson & Perrewe, 1999; Mesmer-Magnus & Viswesvaran, 2009; van Daalen et al., 2006). The final stage of mediation testing found a stronger partial mediation relationship than complete mediation.

Hypothesis 5. Hypothesis 5, which tested the mediating effect of family support for work and non-work roles between work-family conflict and work engagement was rejected due to the

insignificant family support for work and non-work roles –work engagement path in the *All paths* model. This hypothesis could not be tested for any type of mediation.

The review of literature found no studies specifically examining non-work support as a mediator of work-family conflict or family-work conflict and work engagement. Non-work social support such as spousal and family support have been studied extensively in the literature and have been found to have significant mediating effects for work-family conflict and other work outcomes such as job satisfaction and decreased burnout (e.g. Adams et al., 1996; Aryee et al., 1999; Burke et al., 1980; Byron, 2005; Grzywacz et al., 2008; Tatum, 2001; Thomas & Ganster, 1995).

The results of this hypothesis suggest that there may potentially be moderating variables not considered in this study. For example, recovery from work is vital to engagement the next work day. Recovery can be through leisure activities and relaxation such as reading, watching television, using social media, or exercise. Recent research has found social, low-effort, and physical activities (via psychological detachment) to have a significant positive effect upon vigor, a subcomponent of engagement while work-related tasks and household tasks engaged in after work had a negative effect upon vigor the next workday (ten Brummelhuis & Bakker, 2012). Employees may have adequate support from their spouse and family, but if they are unable to recover from work, their level of work engagement may suffer.

Hypothesis 6. Hypothesis 6, which tested the mediating effect of non-work support between work-family conflict and work engagement was supported. As noted in H5, significant mediating effects, in the form of non-work support, have been found in past research between work-family conflict and work engagement (e.g. Adams et al., 1996; Aryee et al., 1999; Burke et

al., 1980; Byron, 2005; Grzywacz et al., 2008; Tatum, 2001; Thomas & Ganster, 1995). The final stage of mediation testing found a stronger partial mediation relationship than complete mediation.

Limitations

Several important limitations must be discussed with this study. Self-reported data issues, the use of cross-sectional data, sample size, and the inability to generalize the results to the general population are noteworthy. The first limitation is the use of self-report data. Although the use of self-report data has several advantages (i.e. ease of use with large samples, economical, efficiency), there are concerns for using self-report data include socially desirability bias, self-evaluation bias, readability of the survey, and forgetfulness (Cook & Campbell, 1979; Pelham & Blanton, 2006). Future studies could include assessments from employees' supervisors and/or coworkers and spouses.

The second limitation in this study was the use of cross sectional data. The highly temporal nature of work-family conflict and work engagement may have created a limitation for this study. Daily schedules for most employees can vary considerably over the course of a week and even within a day which can cause their work-family conflict/family-work conflict, available support, and work engagement levels to vary as well (Bakker et al., 2011a; Xanthopoulou et al., 2009). Hence, the day of the week or the time of day that an employee completed the survey could have influenced their responses. Recent meta-analysis research has called for more longitudinal and diary studies to clarify how work-family conflict and family-work conflict map out over time (Ford et al., 2007; Mesmer-Magnus & Viswesvaran, 2005) as well as how general

supervisor support and family facilitative supervisor interact with work-family/family-work conflict (Kossek, Pichler, et al., 2011).

The third limitation is the sample size used in this study. While large sample sizes increase the reliability of a study, they can also mask insignificant results as significant. This can create fit statistics which have very marginal differences and therefore make it difficult to find the most parsimonious model (Byrne, 2010)

The fourth limitation is the lack of generalizability of this study to the general population. The population used in this study was very homogenous, only included Extension professionals, thus making it difficult to compare to other occupations. The Extension profession is a “helping” profession, not unlike clerics, teachers, nurses, and others in a “helping” occupations. One important difference in this study and other studies examining work engagement is that the Extension population is part of the non-profit sector. The majority of studies demonstrating low levels of work engagement, such as the 2003 Towers Perrin (2003) study, examined the private sector as the population. The 2003 Towers Perrin study (2003) concluded that employees in the non-profit sector were substantially more engaged than employees in any other sector. Employees in the private work sector tend to have different values and responses to occupational rewards than public sector workers.

Key Contributions and Implications for Research and Practice

Although there were limitations for this study, the findings provide a substantial contribution to the work-family conflict/family-work conflict and work engagement research field in two ways. First, there have been few studies examining the specific mediating relationships of available support (work and non-work) between work-family conflict/family-work conflict as an

antecedent and work engagement as the outcome variable (Schaufeli, 2012). Meta-analysis research has noted a lack of research related to social support and work-family conflict/family-work conflict (Eby et al., 2005; Kossek, Pichler, et al., 2011). Of these, even fewer have assessed the social support related to family-work conflict.

The second finding from this study was that *family facilitative* supervisor support does not mediate the relationship between work-family conflict and work engagement. Recent meta-analysis research by Kossek et al (2011) of 115 samples from 85 studies found that studies measuring work-family conflict should use measures which specifically measure work-family support from supervisors rather than global supervisor support measures.

The third way in which this study provided a substantial contribution to the work-family conflict and work engagement research field was the population being studied and the size of the sample. Weyhrauch, Culbertson, Mills, and Fullagar's (2010) study was one of the few studies found in the literature which examined Extension professionals' level of work engagement. They found higher levels of work engagement among employees who have primarily family and consumer sciences responsibilities compared to employees with agriculture or 4-H responsibilities. Future studies should consider differences among employees with regard to their work responsibilities, gender, age, parental status, and other factors. While gender differences were not discussed in this study, it is important to recognize that gender differences are deeply ingrained in work-family relationships (e.g. Behson, 2002; Eby et al., 2005; Frone et al., 1992; Parasurman & Simmers, 2001). Family structure should also be strongly considered in work family research. For example, one's parental status has been linked to work-family conflict (e.g.

Bianchi & Milkie, 2011; Carlson & Perrewe, 1999; Grandey & Cropanzano, 1998; Grzywacz & Marks, 2000).

Implications for Research

The first implication, which may be the most paramount to researchers, was the reaffirmation of work-family conflict as a single, second order construct consisting of six first order constructs of work-family time, strain, and behavior, and family-work time, strain, and behavior. McMillan (2011a) found similar results. Past research has recommended treating conflict as two separate domains (i.e. work-family conflict and family-work conflict). This approach, however, fails to fully capture individual's real work-family conflict experience. Kanter (1977) was the first to challenge the myth that work and family are separate spheres. This new construct recognizes that employees may not always be able to discern whether the cause of their conflict is work-family or family-work and supports Frone et al.'s. (1992) contention that individuals have difficulty separating out their work and family roles. Work-family conflict as one construct has a greater aggregated effect than two separate constructs.

Work-to-family boundary management theory proposes that boundaries are created and maintained between several life domains (Ashforth, Kreiner, & Fugate, 2000; Clark, 2000). The relationships between domains such as work and family are managed by individuals by either 1) refining their boundaries which results in segmentation (Ashforth et al., 2000) or 2) blurring their boundaries, which results in integration (e.g. Ashforth et al., 2000; Clark, 2000; Morris & Madsen, 2007) of the domains. Based on the results of this study, I contend that Extension professionals are "border crossers" and make daily transitions between the two domains of work and family. Individuals shape their worlds and mold their boundaries between them. Clark

(2000) suggests that one's flexibility and permeability of role boundaries and the contrast in role identities affect how segmented their roles are. For most Extension organizations, informal flexibility exists at work. Most employees are able to integrate their work and family domains. For example, 4-H Agents working at a weekend assignment such as a livestock show might include their family when own child is competing in the show. The development of a single, second-order construct of work-family conflict in this study gives credence to the boundary theory and future research should examine this with other populations.

The second research implication from this study is that future analysis should be more fine grained for the Work-Family Conflict, Family-Work Conflict, and Work Engagement Scales. The level of support that individuals can offer an employee is dependent upon the type of conflict involved. For example, a supervisor can offer support for an employee who is primarily experiencing time conflict. However, if the employee is experiencing more behavioral conflict, support from the supervisor may not be available. If the individual is unable to change his/her behavior to what is expected between roles, conflict may arise (Greenhaus & Beutell, 1985). Another example is with the Work Engagement Scale which consisted of three subscales: vigor, dedication, and absorption. An individual may have a high level of vigor or absorption, but that does not mean there is a high level of dedication. Future studies should examine these subscales as separate antecedent variables.

The third implication for research concerns the use of *family facilitative* versus *global* measures of supervisor support to determine a work-family relationship. At the time that this sample was surveyed research did not exist demonstrating that family facilitative supervisor support measures better predicted work-family relationships. Since that time, Kossek et al's.

(Kossek, Pichler, et al., 2011), recent meta-analysis drawing on 85 samples, 158 studies, and 72,507 employees, presented new findings related to the type of supervisor support provided. This meta-analysis emphasized the importance of distinguishing between *global supervisor support* measures such as the support appraisal for work stressors – supervisor and *family facilitative* measures such as the supervisor support for work, personal and family life. While *global supervisor support* provides support for an employee's effectiveness at work, *family facilitative supervisor support* enables the employee to effectively manage their work and family responsibilities. However, this study contradicted this meta-analysis research. Global supervisor support, rather than supervisor support for work, personal and family life, mediated the relationship between work-family conflict and work engagement. As previously discussed, one possible explanation for this is work-family backlash. Childless employees, single employees, and same sex couples may feel penalized at work when they are required to increase their work hours to compensate for colleagues with parental responsibilities leaving work. They may also view the organization's work-family benefits as inequitable or even discriminatory since they do not use them (Parker & Allen, 2001; Young, 1999). Also, since over half of the participants were 43 and older, over half did not have children, and of those with parental status over half had children over 11, a moderating effect may exist. Future research should examine differences between individuals to determine whether this exists.

The fourth implication for research is the need to replicate this study with a wider range of occupations. This study was very narrow in that the only occupation assessed was Extension professionals. There are many other "helping" type occupations such as teachers, nurses, and

ministers which might have similar outcomes if comparisons were made. Future studies should examine differences between Extension and the general population.

The fifth implication for research is to consider other potential mediating variables relevant to this study such as job demands, job control, flexibility, work-family backlash, personality factors (conscientiousness and emotional stability), person-environment fit, and recovery from job activities. Consideration should also be given to control variables such as parental status, age of participants, age of children living at home, employee's area of responsibility, and educational level. As noted in Chapter 3, over half of the participants had non-parental status, over half of the participants were between the ages of 43 – 56, and over half of those who were parents had children between the ages of 11-18. These demographic differences may explain some of the unexplained findings.

The sixth implication for research is the need for longitudinal or diary studies. As discussed in limitations, work-family conflict, family-work conflict, and work engagement are, in particular, state like constructs. Employees' schedules can vary substantially over time and even within a day which can also cause these constructs to vary. Longitudinal and diary studies can lessen issues with causality which are frequently found with cross sectional studies (e.g. Bakker et al., 2011b; Ford & Locke, 2002; Mesmer-Magnus & Viswesvaran, 2005; ten Brummelhuis & Bakker, 2012; Xanthopoulou et al., 2009).

A review of the literature found no existing studies examining the specific relationships with an Extension occupation that were tested in this study. This study assessed the Extension population on a national level with 46 of the 50 states participating and a final sample size of

2,782. The participants' level within the organization varied from county employee, county supervisors, regional supervisors, and state supervisors.

The implications of this research are easily transferrable to practices within the Extension population and will now be discussed.

Implications for Practice

The findings from this study provide future directions for practice within the Extension organization. The most relevant implications for practice include training for supervisors and organizational support (work-family policies, work culture, and job design). Although not directly related to human resource practices, implications will also be discussed regarding how non-work support sources serve to mediate the family-work conflict and work engagement relationship.

Training for supervisors and colleagues. Supervisor training is one of the most widely recommended interventions encouraged for organizations addressing the work-family conflict interface (e.g. Allen, 2001; Hammer et al., 2011; Kossek, Pichler, et al., 2011; Thomas & Ganster, 1995). Although this study did not support the need for supervisors to offer employees *family facilitative* supervisor support, total elimination of this type of training should not be considered. This Extension population was a very homogenous population and its work-family conflict levels were not representative of the general population. The possibility exists, due to low work-family conflict and family-work conflict levels, that this type of supervisor support is not warranted. For the general population work family issues have only recently become part of a supervisor's leadership role (Kossek, Lewis, & Hammer, 2010). Consequently, supervisors may not demonstrate high levels of support without proper training. Therefore, Extension

organizations should consider implementing supervisor training which provides them with tools and resources for assisting employees with work-family balance.

Consistent with training research, it is crucial that supervisor training includes a format that encourages motivation to transfer the content learned in training to the job. Burke and Hutchins' (2007) review of transfer of training literature recommends self-management strategies such as setting specific challenging goals, using action plans, and using self-monitoring behaviors. Self-management strategies such as these should be considered for Extension supervisors within their own performance evaluations for Extension organizations across the United States in addition to in-depth face-to-face training. Closely related to supervisor work-family support is colleague support.

Empirical research has consistently proven that social support from colleagues predicts work outcomes such as job satisfaction, intent to turnover, employee retention, and work engagement (Bakker, 2008; Hakanen, 2008; Macey, 2008; Clark, 2001; Behson, 2005; NG, 2008). Extension organizations should consider implementing training or in-services that address the need and benefit for employees to provide colleague support. Extension employees are very good at assisting their colleagues when needed. For example, an employee may take on a colleague's responsibilities while they are away from work caring for an elder parent or a sick child. It is very common for Extension professionals to work as a team, whether it be in a county office environment or a state subject matter specialist office environment.

Organizational support. Although this study did not examine perceived organizational support, there are components of this area of research that closely relate to some of the implications gleaned from the findings.

Kossek, Baltes and Matthews (2011) define organizational support as pertaining “to the degree to which the workplace is designed to reduce work-family conflict and enhance work-family interaction (p. 3)” Research examining the impact of supportive organizational work-family culture on employees’ work-family conflict has consistently resulted in positive findings (e.g. Allen, 2001; Batt & Valcour, 2003; S. J. Behson, 2005; Galinsky et al., 1996; Hill, 2005; Thompson et al., 1999). Organizational work-family support in the workplace consists of three elements that affect the interface between work and family relationships: (1) work-family policies that are supportive of employees managing their work and family roles; (2) work-family culture and its influence on expectations of work and non-work relationships and (3) job design, such as work schedule and the structure of work that give employees control over how, where and when they work (Kossek, Baltes, et al., 2011). These three workplace elements will now be discussed with specific recommendations for Extension organizations.

Work family policies. Since the expansion of work-family research began in the early nineties, numerous companies and organizations have increasingly responded to public pressure, to demographic changes, and to work-family advocates by creating work-family friendly policies. From expanding family leaves, restructuring work schedules, to providing on-site child care, the work-family friendly policies/benefits companies and organizations are now providing has increased at a steady pace. Media campaigns such as “Working Mother Best 100 Companies” demonstrate that organizations realize that to stay competitive they must offer work-friendly benefits to attract and keep talent. Numerous studies suggest that organizations providing work-family friendly policies benefit by retaining their talent and creating employees who are more satisfied and engaged with their jobs (e.g. Blair-Loy & Wharton, 2002; Bond et

al., 2005; Kelly et al., 2008; Kossek, 2005; Kossek & Michel, 2010; Milliken & Martinis, 1998). Work-family friendly policies have also been found to save money through decreases in turnover and absenteeism (Kossek & Michel, 2010).

Kossek et al. (2011) defines work-family policies as “organizational programs, policies, and practices that are designed to assist employees with the joint management of a paid work role with non-work roles such as parenting, elder care, leisure, education, volunteering, and self-care” (p. 3). While the number of work-friendly benefits has dramatically increased over the last 20 years, recent research points to an implementation gap between research and practice (Kossek, Baltes, et al., 2011; Lambert & Waxman, 2005; Van Deusen, James, Gill, & McKechnie, 2008). There are three primary reasons this gap exists. First, it can be difficult to translate work-family research into practice. Supervisors may lack work-family training or experience and organizations may be uncertain of how work-family policies should be implemented into existing policies. Second, organizations may be unsure whether certain policies, such as flextime, should be offered to all employees. Additionally, the growing diversity of the workforce can make it difficult to decide which policies provide a better fit for which employees. Third, researchers and practitioners have different agendas (Kossek, Baltes, et al., 2011).

The work-family policies available within Extension organizations vary from state to state. Since Extension professionals are employed by land grant colleges and universities, they have access to a wide array of policies, but flexible scheduling policies such as flextime, compressed work weeks, telecommuting, and on-off ramping are rare. The work location of Extension professionals are usually scattered across each state and they may not have access to

the same level of work-family policies that on campus professionals have. For example, in Tennessee a formal flextime, telecommuting, and compressed work week policy exists for employees working on campus that are not applicable to Extension employees. Extension administrators often pay “lip service” to having an informal flexible work schedule and encourage employees to balance their work and family lives, but do not provide support in terms of formal policies for employees who use flextime. In some instances, the county supervisor may not support this type of schedule, even after it has been supported by state administration. Additionally, most states have multi-level supervision. Therefore, an Extension professional may have as many as four supervisors at various levels including the county, regional, and state. A regional or state administrator may be supportive of Extension professionals informally using flextime, but a county supervisor may not be so supportive.

Although scheduling alternatives were not examined in this study, Extension organizations across the country need to examine their work-family related work schedule policies. If Extension professionals are going to be asked to work long hours, often at night and on weekends, then they need the availability of alternate work schedules.

Work-family culture. Closely related to formal work-family policies, supervisor support, and colleague support is the concept of work-family culture, a form of organizational support. Thompson et al. (1999) defined work-family culture as the “shared assumptions, beliefs, and values regarding the extent to which an organization supports and values the integration of employees’ work and family lives” (p. 394). Empirical support has been found for work-family culture as a predictor of organizational outcomes (e.g. Kinnunen et al., 2004; Mesmer-Magnus & Viswesvaran, 2005). Similarly, several researchers have noted that organizational work-family

benefits and a supportive work family culture are positively related to job satisfaction, motivation and a reduction in work stress (e.g. Allen, 2001; S. J. Behson, 2005; Casper & Buffardi, 2003; Thompson et al., 1999). Formal work-family benefits, in the absence of a supportive work-family culture, will not benefit an organization or its employees (Allen, 2001; Thompson et al., 1999). While work-family culture was not specifically examined in this study, it is an important consideration for Extension organizations. Negative career consequences may exist for employees who use work-family benefits. The traditional supervisor in Extension values “face time”. Extension organizations, top administrators, and immediate supervisors play a vital role in the work-family culture, but it is essential that the top administrators, in particular, lead in this effort. A first step would be to assess individual employees’ perceptions of the Extension organization’s work-family culture. The findings of the assessment should then be discussed in focus groups at all levels within the organization and recommendations made for organizational strategies and policies to be implemented. It is crucial, however, that supervisors and administrators at all levels serve as role models with the strategies and policies that are put into place. If Extension professionals merely see “lip service” from management, a negative work-family culture will remain within the organization.

Organizations have tended to provide more work-family support for married employees or those with children. Past research has found that single employees can suffer from “work-family backlash” and be treated differently than employees with families. This can leave single employees with feelings of being excluded socially, unequal work opportunities, unequal access to employment benefits, unequal respect for non-work roles, and unequal work expectations (Casper, Weltman, & Kwesiga, 2007). Since past research has linked perceived inequity to

negative work outcomes such as job satisfaction and work engagement, Extension organizations are encouraged to support work-family issues in a more equitable manner (Casper et al., 2007; Greenberg, 1990). To avoid “work-family backlash,” training should be designed so that employees who are married and/or have children are not the only employees receiving the end benefit.

Job design. While this study did not specially examine job design, the results suggest that it may hold part of the key to the work-family interface of Extension professionals. Holman, Clegg, and Waterson (2002) defined job design as “the content of the job that a group or individual undertakes (for example, the tasks and roles they fulfill) and the methods they use to undertake their work” (p. 197). Job design can play a vital role in an organization’s success and the employees’ goals. Productivity and costs can be impacted by the way in which tasks and responsibilities are grouped. Meta-analyses have noted that there is less work-family conflict among employees with more control over their work schedule (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2005).

A review of the literature did not uncover any studies using an Extension sample to address job design in an effort to alleviate work-family/family-work conflict. Still, some do touch on job design and its effect on turnover, job satisfaction and intent to leave rates (e.g. Ensle, 2005; Ezell, 2003; Martin, 2001; Rousan & Henderson, 1996). A recent national Delphi study of 30 Extension professionals attending a national leadership development program asked the participants what they believed would be the most important issues over the next 5 – 7 years to attract, motivate, and retain Extension professionals. While “competitive salaries and benefits” was the highest ranking response, the second highest ranking response was “Assuring an

environment that supports the accomplishment of work, including autonomy, resources, recognition, removing barriers, and a reasonable workload.” This was followed by the third highest ranking response of “balancing work and life.”

The Job Resources (JD-R) model demonstrates that job resources (colleague support, supervisor support, performance feedback, and autonomy) create motivation among employees which leads to work engagement. When employees encounter high job demands, such as work overload, these job resources become more relevant and motivational (Demerouti & Bakker, 2011). Job resources are positively associated with work engagement (Bakker & Demerouti, 2008a; Halbesleben, 2009).

Job design can benefit Extension organizations by addressing work overload, control over work, shiftwork, and excessive work hours. Extension professionals are asked to work long hours, including nights and weekends. Numerous studies verify the high number of work hours of Extension professionals (e.g. Ensle, 2005; Ezell, 2003; Kutilek et al., 2002; Martin, 2001; Rousan & Henderson, 1996). In this study, 53 % of employees reported working between 50 – 60 hours per week. Depending upon one’s supervisor, an Extension professional who conducts a night meeting may be expected to report to work the following morning at the normal starting time. Extension organizations should consider alternate forms of work such as telecommuting, flextime, and compressed work weeks which have proven to be effective in reducing work-family/family-work conflict. Past meta-analyses have provided support for flexible and compressed schedules positively affecting work outcomes such as job satisfaction and productivity, and negatively affecting absenteeism (Baltes, Briggs, Huff, Wright, & Neuman, 1999; Byron, 2005). Flexible work schedules would allow Extension professionals to vary the

start and end times of their work depending upon their needs. For example, an employee who has just completed a full week of night meetings with clientele may need to adjust the time they report to their office the next morning. Telecommuting, used sparingly, would allow Extension professionals to work from alternate locations other than the office. For example, an employee could conceivably be able to complete some of their work tasks from home at their computer and/or telephone while caring for a sick child.

While flexible work schedules and telecommuting are becoming more common for Extension organizations, compressed work schedules are uncommon. Compressed work schedules are a type of flexible work arrangement in which there are longer shifts for fewer days of the week as opposed to the typical workday that is 8 hours and 5 days a week (Rau, 2003). Employees with this type of schedule generally work a 40-hour week, but may only work 3 or 4 days during the week and working a 10 – 13 hour day. Compressed work schedules also offer a viable option for job design within the Extension organization. In a longitudinal study, the Best Buy company headquarters recently implemented a “Results-Only Work Environment” (ROWE). The initiative differed from flexible scheduling in that it included an organizational culture shift where the norm was the flexibility of working when and where an employee wanted as long as the work was done. The ROWE initiative positively affected work-family conflict for the employees. Extension organizations should pilot these types of alternate work schedules, as a first step to addressing the work-family/family-work – work engagement relationship.

Non-work support. The second major finding from this study was that non-work support makes a significant contribution to the relationship between work-family/family-work conflict and work engagement. Non-work support may come from family, friends, and/or spouse or

partner. Spousal support has been found to be a significant non-work resource in mediating work-family conflict (e.g. Aryee et al., 1999; Blanton & Morris, 1999; Burke et al., 1980; Byron, 2005; Grzywacz et al., 2008). High levels of spousal support have been found to reduce inter-role conflict (Carlson & Perrewé, 1999) and low levels to be negatively related to family-work conflict. Since the majority of participants in this study (76%) were married, this finding was not surprising. The way in which Extension organizations could promote non-work support for their employees is unclear. One possibility is providing work programs that include spousal or family participation such as company social events and benefits such as family therapy.

Summary

This study utilized stress theory to explore the effects of work-family conflict and family-work conflict upon the work engagement outcomes of employees. The findings from this study, which used a sample of 2,782 Extension professionals in 46 states, made several contributions to the literature. Results indicate that a single, second order construct of work-family conflict which includes six first-order constructs of work-family time, strain, behavior and family-work time, strain, and behavior. The bi-directionality of work-family conflict and family-work conflict was sustained, as numerous research studies have recommended (e.g. Carlson et al., 2000; Frone, 2003; Greenhaus & Beutell, 1985; Grzywacz & Marks, 2000; Kelloway et al., 1999). Results from this study revealed that perceived available support in the form of global supervisor support, colleague support and non-work support partially mediated work-family conflict and work engagement. The work-family conflict levels for this sample were low and the work engagement levels were very high. Extension human resource professionals should recommend to organizations to increase formal work-family support. Organizations should ensure that their

employees feel supported both by their supervisor and the organization. Extension organizations should consider evaluating their work-family culture and the job design of the employee. Finally, Extension organizations should encourage and facilitate healthy relationships outside of work.

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APPENDICES

APPENDIX A. List of Abbreviations

Abbreviation	Construct/Variable
WFC	Work-family conflict
FWC	Family-work conflict
ENGAGE	Work engagement
GLOSUPSUP	Global supervisor Support
SUPSUP	Supervisor support for work, personal and family life
COLSUP	Colleague Support
NWSUP	Non-work Support
FAMSUP	Family Support for Work and Non-work Roles

APPENDIX B. Questionnaire

Special Note: As you complete this questionnaire you will notice that several of the items refer to your “family.” Please keep in mind that your “family” may include a spouse, partner, children, parents, siblings, etc.

Please indicate your agreement with the following statements on the scale provided below. There are no right or wrong answers, simply provide your perspective on your work and family life.

Work Interference with Family Scale

Carlson, Kacmar, & Williams, 2000, $\alpha = .87$

Please answer the questions below using a scale of 1 to 5, with 1 indicating “Strongly Disagree,” 3 indicating “Neither Agree or Disagree,” and 5 indicating “Strongly Agree.”

Time-Based WFC (WF1 – WF3)

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

Strain-based WFC (WF4 – WF6)

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

Behavior-based WFC (WF7 – WF9)

7. The problem-solving behaviors I use in my job are not effective in resolving problems at home.
8. Behavior that is effective and necessary for me at work would be counterproductive at home.
9. The behaviors I perform that make me effective at work do not help me be a better parent and spouse.

Family Work Conflict Scale

Time-based FWC (FW1-FW3)

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

Strain-based FWC (FW4 – FW6)

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

Behavior-based FWC (FW7 – FW9)

7. The behaviors that work for me at home do not seem to be effective at work.
8. Behavior that is effective and necessary for me at home would be counterproductive at work.
9. The problem-solving behavior that works for me at home does not seem to be as useful at work.

Support Appraisal for Work Stressors Scales (SAWS) (Lawrence, Gardner, & Callan, 2007)

Lawrence, Gardner, & Callan, 2007

The following questions ask about the reliability of various people in providing you with support, when you experience problems at work. Please respond to each question by circling a number from the rating scale below in all three columns. In this way, for each question, you will rate separately your direct supervisor, your work colleagues and your partner/family/friends.

Not at all 1	A little 2	Somewhat 3	Very much 4
Direct Supervisor	Colleagues		Non-work (partner/family/friends)

SAWS *emotional*

How much can you rely on your direct supervisor (SAWSSUP1-SAWSSUP3).....

How much can you rely on your colleagues (SAWSCO1-SAWSCO3).....

How much can you rely on your partner/family/friends (SAWSNW1- SAWSNW3)...

1. to help you feel better when you experience work-related problems?
2. to listen to you when you need to talk about work-related problems?
3. to be sympathetic and understanding about your work-related problems?

SAWS *informational*

How much can you rely on your direct supervisor (SAWSSUP4-SAWSSUP6).....

How much can you rely on your colleagues (SAWSCO4-SAWSCO6).....

How much can you rely on your partner/family/friends (SAWSNW4- SAWSNW6)...

4. to suggest ways to find out more about a work situation that is causing you problems?

5. to share their experiences of a work problem similar to yours?
6. to provide information which helps to clarify your work-related problems?

SAWS instrumental

How much can you rely on your direct supervisor (SAWSSUP7-SAWSSUP9).....

How much can you rely on your colleagues (SAWSCO7-SAWSCO9).....

How much can you rely on your partner/family/friends (SAWSNW7- SAWSNW9)...

7. to give you practical assistance when you experience work-related problems?
8. to spend time helping you resolve your work-related problems?
9. to help when things get tough at work?

SAWS appraisal

How much can you rely on your direct supervisor (SAWSSUP10-SAWSSUP12).....

How much can you rely on your colleagues (SAWSCO10-SAWSCO12).....

How much can you rely on your partner/family/friends (SAWSNW10- SAWSNW12)...

10. to reassure you about your ability to deal with your work-related problems?
11. to acknowledge your efforts to resolve your work-related problems?
12. to help you evaluate your attitudes and feelings about your work-related problems?

Supervisor support to manage work, personal, and family life

Families & Work Institute, National Study of the Changing Workforce (NSCW) 2002

Please indicate the level of support you feel you have from your supervisor with the statements below using a scale of 1 to 4, with 1 indicating “Strongly Disagree,” 2 indicating “Disagree,” 3 indicating “Agree,” and 4 indicating “Strongly Agree.”

1. My supervisor or manager is fair and doesn't show favoritism in responding to employees' personal or family needs. (SSUP1)
2. My supervisor or manager accommodates me when I have family or personal business to take care of -- for example, medical appointments, meeting with child's teacher, etc. (SSUP2)
3. My supervisor or manager is understanding when I talk about personal or family issues that affect my work. (SSUP3)
4. I feel comfortable bringing up personal or family issues with my supervisor or manager. (SSUP4)
5. My supervisor or manager really cares about the effects that work demands have on my personal and family life. (SSUP5)

Family Support for work and non-work roles*

Adapted from Aryee 1999, adapted Matsui et al., 1995; Frone & Yardley, 1996; and King, Mattitmore, King, & Adams, 1995

Please indicate how you feel about each statement by using the following: “1 = Strongly Disagree,” “2 = Disagree,” “3 = Neither agree or disagree,” “4 = Agree,” “5 = Strongly Agree,” and “6 = Not applicable.”

1. My family is very supportive of my participation in the work force. (FSUP1)
2. My family understands that I have to accomplish both work and family duties. (FSUP2)
3. If my job gets very demanding, my family usually takes on extra household or child care responsibilities. (FSUP3)
4. My family looks after themselves to reduce my share of household responsibilities. (FSUP4)
5. I can depend on my family to help me with household or child care responsibilities if I really need it. (FSUP5)

Spousal Support for work and non-work roles*

Adapted from Aryee 1999, adapted Matsui et al., 1995; Frone & Yardley, 1996; and King, Mattitmore, King, & Adams, 1995

Please indicate how you feel about each statement by using the following: “1 = Strongly Disagree,” “2 = Disagree,” “3 = Neither agree or disagree,” “4 = Agree,” “5 = Strongly Agree,” and “6 = Not applicable.”

1. My spouse/partner is very supportive of my participation in the work force. (SPSUP1)
2. My spouse/partner understands that I have to accomplish both work and family duties. (SPSUP2)
3. If my job gets very demanding, my spouse/partner usually takes on extra household or child care responsibilities. (SPSUP3)
4. My spouse/partner looks after themselves to reduce my share of household responsibilities. (SPSUP4)
5. I can depend on my spouse/partner to help me with household or child care responsibilities if I really need it. (SPSUP5)

*Family support for work and non-work roles and spousal support for work and non-work roles were initially two separate scales. The two were combined and labeled “Family Support for work and non-work roles” during the measurement model analysis.

Utrecht Work Engagement Scale

Schaufeli, Salanova, Gonzalez-Roma, Bakker, 2002, Journal of Happiness Studies, 3, 71-92).

Two versions: student and employee –employee only below

Please answer the following questions using the scale “1 = Never,” “2 = Almost Never,” “3 = Rarely,” “4 = Sometimes,” “5 = Often,” “6 = Very Often,” and “7 – Always.

Vigor

1. When I get up in the morning, I feel like going to work. (ENGAV1)
2. At my work, I feel bursting with energy. (ENGV2)
3. I can continue working for very long periods at a time. (ENGV3)
4. At my job, I am very resilient, mentally. (ENGV4)
5. At my job, I feel strong and vigorous. (ENGV5)
6. At my work I always persevere, even when things do not go well. (ENGV6)

Dedication

7. To me, my job is challenging. (ENGD7)
8. My job inspires me. (ENGD8)
9. I am enthusiastic about my job. (ENGD9)
10. I am proud of the work that I do. (ENGD10)
11. I find that the work that I do is full of meaning and purpose. (ENGD11)

Absorption

12. When I am working, I forget everything else around me. (ENGAB12)
13. Time flies when I am working. (ENGAB13)
14. I get carried away when I am working. (ENGAB14)
15. It is difficult to detach myself from my job. (ENGAB15)
16. I am immersed in my work. (ENGAB6)
17. I feel happy when I am working intensely. (ENGAB17)

1. What Institution do you currently work for?
2. How many years have you been employed with your Extension institution?
3. With another Extension institution?
4. Which best describes your area of responsibility(s)?

Agriculture

Agriculture and 4-H

Family and Consumer Sciences

Family and Consumer Sciences and 4-H

4-H and youth development

Marine

Integrated Pest Management

EFNEP/ENP

Other (please specify): _____

5. On average, how many hours per week do you work for Extension?
6. How many hours do you work in paid employment outside of Extension?
7. How many years have you held your present position?
8. What level is your position at?

County

District/Area/Regional

State

9. Are you a supervisory position?

Yes No

10. Age 22-26 _____ 27-31 _____ 32-39 _____ 40 – 49 _____ 50-60 _____
61+ _____

11. Male _____ Female _____

12. Present marital status: (check all that apply)

Single (never been married) _____

Married _____

Divorced _____

Widowed _____

Separated _____

Explanation (optional) _____

13. Length of present marital status: _____

14. Is your spouse currently employed?

Yes _____

No _____

15. If you answered “yes”, are they employed full time or part time?

Full time (works 40 or more hours/week) _____

Part time (works 30 or more hours/week) _____

16. What is the number of children **living in** your household? _____

17. What are their ages? _____

18. Are you providing elder care? Yes No

19. Which best describes your current family cycle stage?

____ Single, never married

____ Newly married (no children)

____ Family with children at home (under age 18)

____ Launching stage (children leaving home)

____ Later years (near retirement, no children at home)

20. Highest degree earned:

☐ Bachelor's degree

☐ Master's degree

☐ Doctorate degree

Appendix C. Final Measures, Loadings, Average Variance Extracted and Cronbach's Alpha

Construct and Scale	Measure	Item Loading	AVE	Alpha
Work-Family Conflict Construct (WFC) (Exogenous) Work Family Scale	<i>My work keeps me from my family activities more than I would like.</i>	.856	.649	.86
	<i>The time I must devote to my job keeps me from participating equally in household responsibilities and activities.</i>	.702		
	<i>I have to miss family activities due to the amount of time I must spend on work responsibilities.</i>	.848		
	<i>When I get home from work I am often too frazzled to participate in family activities/responsibilities.</i>	.854		
	<i>I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.</i>	.905		
	<i>Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.</i>	.726		
	<i>The problem-solving behaviors I use in my job are not effective in resolving problems at home.</i>	.740		
	<i>Behavior that is effective and necessary for me at work would be counterproductive at home.</i>	.795		
	<i>The behaviors I perform that make me effective at work do not help me be a better parent and spouse.</i>	.800		

Appendix C. Continued

Construct and Scale	Measure	Item Loading	AVE	Alpha
Family-Work Conflict Construct (FWC) (Exogenous) Family Work Conflict Scale	<i>The time I spend on family responsibilities often interferes with my work responsibilities.</i>	.780	.683	.86
	<i>The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career.</i>	.791		
	<i>I have to miss work activities due to the amount of time I must spend on family responsibilities.</i>	.749		
	<i>Due to stress at home, I am often preoccupied with family matters at work.</i>	.867		
	<i>Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.</i>	.917		
	<i>Tension and anxiety from my family life often weakens my ability to do my job.</i>	.766		
	<i>The behaviors that work for me at home do not seem to be effective at work.</i>	.836		
	<i>Behavior that is effective and necessary for me at home would be counterproductive at work.</i>	.881		
	<i>The problem-solving behavior that works for me at home does not seem to be as useful at work.</i>	.834		

Appendix C. Continued

Construct and Scale	Measure	Item Loading	AVE	Alpha
Family support for work and non-work roles (FAMSUP) (Mediator)	<i>My family is very supportive of my participation in the work force.</i>	.645	.523	.92
	<i>My family understands that I have to accomplish both work and family duties.</i>	.661		
Family support for work and non-work roles (b)	<i>If my job gets very demanding, my family usually takes on extra household or child care responsibilities.</i>	.809		
	<i>My family looks after themselves to reduce my share of household responsibilities.</i>	.774		
	<i>I can depend on my family to help me with household or child care responsibilities if I really need it.</i>	.786		
	<i>My spouse/partner is very supportive of my participation in the work force.</i>	.588		
	<i>My spouse/partner understands that I have to accomplish both work and family duties.</i>	.631		
	<i>If my job gets very demanding, my spouse/partner usually takes on extra household or child care responsibilities.</i>	.758		
	<i>My spouse/partner looks after themselves to reduce my share of household responsibilities.</i>	.747		
	<i>I can depend on my spouse/partner to help me with household or child care responsibilities if I really need it.</i>	.795		

Appendix C. Continued

Construct and Scale	Measure	Item Loading	AVE	Alpha
Non-work Support (non-work)	How much can you rely on your spouse/partner/friends....?		.679	.96
NWSUP (Mediator)				
SAWS (Non-work) (emotional) (c)	....to help you feel better when you experience work-related problems?	.805		
	....to listen to you when you need to talk about work-related problems?	.779		
	....to be sympathetic and understanding about your work-related problems?	.795		
SAWS (g) (Non-work) (Information)	....to suggest ways to find out more about a work situation that is causing you problems?	.850		
	....to share their experiences of a work problem similar to yours?	.781		
	....to provide information which helps to clarify your work-related problems?	.853		
SAWS (Non-work) (Instrum.) (g)	....to give you practical assistance when you experience work –related problems?	.862		
	....to spend time helping you resolve your work-related problems?	.860		
	....to help when things get tough at work?	.823		
SAWS (Non-work) (appraisal) (g)	....to reassure you about your ability to deal with your work-related problems?	.818		
	....to acknowledge your efforts to resolve your work-related problems?	.835		
	....to help you evaluate your attitudes and feelings about your work- related problems?	.839		

Appendix C. Continued

Construct and Scale	Measure	Item Loading	AVE	Alpha
Supervisor support for work, personal, & family life (SUPSUP) (Mediator)	<i>My supervisor or manager is fair and doesn't show favoritism in responding to employees' personal or family needs.</i>	.766	.671	.91
	<i>My supervisor or manager accommodates me when I have family or personal business to take care of -- for example, medical appointments, meeting with child's teacher, etc.</i>	.748		
	<i>My supervisor or manager is understanding when I talk about personal or family issues that affect my work.</i>	.871		
	<i>I feel comfortable bringing up personal or family issues with my supervisor or manager.</i>	.817		
	<i>My supervisor or manager really cares about the effects that work demands have on my personal and family life.</i>	.870		

Appendix C. Continued

Construct and Scale	Measure	Item Loading	AVE	Alpha
Global Supervisor Support (Direct Supervisor) (GLOSUPSUP) (Mediator)	How much can you rely on your <i>direct supervisor</i>?		.746	.97
Support Apprais. for Work Stressors Scale (Direct Supervisor) ^g (emotional)	....to help you feel better when you experience work-related problems?	.864		
	....to listen to you when you need to talk about work-related problems?	.854		
	....to be sympathetic and understanding about your work-related problems?	.878		
(Informational)	....to suggest ways to find out more about a work situation that is causing your problems?	.888		
	....to share their experiences of a work problem similar to yours?	.799		
	....to provide information which helps to clarify your work-related problems?	.871		
(instrumental)	....to give you practical assistance when you experience work-related problems?	.888		
	....to spend time helping you resolve your work-related problems?	.886		
	....to help when things get tough at work?	.866		
(appraisal)	....to reassure you about your ability to deal with your work-related problems?	.873		
	....to acknowledge your efforts to resolve your work-related problems?	.863		
	....to help you evaluate your attitudes and feelings about your work-related problems?	.853		

Appendix C. Continued

Construct and Scale	Measure	Item Loading	AVE	Alpha
Colleague Support (Mediator) (COLSUP)	How much can you rely on your <i>colleagues</i>?		.739	.97
Support Apprais. for Work Stressors Scale (Colleague) ^g (emotional)	....to help you feel better when you experience work-related problems?	.837		
	....to listen to you when you need to talk about work-related problems?	.832		
	....to be sympathetic and understanding about your work-related problems?	.844		
(Informational)	....to suggest ways to find out more about a work situation that is causing you problems?	.876		
	....to share their experiences of a work problem similar to yours?	.831		
	....to provide information which helps to clarify your work-related problems?	.882		
(Instrumental)	....to give you practical assistance when you experience work -related problems?	.890		
	....to spend time helping you resolve your work-related problems?	.871		
	....to help when things get tough at work?	.835		
(Appraisal)	....to reassure you about your ability to deal with your work-related problems?	.881		
	....to acknowledge your efforts to resolve your work-related problems?	.852		
	....to help you evaluate your attitudes and feelings about your work-related problems?	.831		

Appendix C. Continued

Construct and Scale	Measure	Item Loading	AVE	Alpha
Work Engagement Outcome (Exogenous)	<i>When I get up in the morning, I feel like going to work.</i>	.787	.453	.93
Work Engagement Scale (a)	<i>At my work, I feel bursting with energy.</i>	.505		
(Vigor)	<i>I can continue working for very long periods at a time.</i>	.463		
	<i>At my job, I am very resilient, mentally.</i>	.798		
	<i>At my job, I feel strong and vigorous.</i>	.850		
	<i>At my work I persevere.</i>	.670		
(Dedication)	<i>To me, my job is challenging.</i>	.704		
	<i>My job inspires me.</i>	.410		
	<i>I am enthusiastic about my job.</i>	.644		
	<i>I am proud of the work that I do.</i>	.521		
	<i>I find that the work that I do is full of meaning and purpose.</i>	.410		
(Absorption)	<i>When I am working, I forget everything else around me.</i>	.644		
	<i>Time flies when I am working.</i>	.521		
	<i>I get carried away when I am working.</i>	.545		
	<i>It is difficult to detach myself from my job. (deleted)</i>	.410		
	<i>I am immersed in my work.</i>	.631		
	<i>I feel happy when I am working intensely.</i>	.523		

a Never-always (1 = “never,” 7 = “always”) b Not at all likely-extremely likely scale (1 = “not at all likely,” to 6 = “extremely likely”) c Agree –disagree scale (1 = “strongly disagree,” 7 = “strongly agree”) e Agree – disagree scale (1 = “strongly disagree,” 5 = “strongly agree”) f Agree –disagree scale (1 = “strongly disagree,” 4 = “strongly agree”) g Not at all-very much scale (1 = “Not very much,” 4 = “very much”) h Strongly disagree-strongly agree-not applicable scale (1 = “strongly disagree,” 5 = “strongly agree,” 6 = “not applicable”)

APPENDIX D

REQUEST TO ADMINISTRATORS (sent in email and hard copy)

April B. Martin
115 West Market St.
Smithville, TN 37166
amartin3@utk.edu
(615)-597-4945

November 16, 2006

Dear Extension Director:

I am a doctoral student at The University of Tennessee in the Human Resource Development Department. I also work full time for Extension as a County Family and Consumer Agent in adult and youth programming.

If everything goes as planned, in February or March I will be disseminating a web-based questionnaire to a national sample of Extension Agents. My dissertation is addressing the work-family conflict of Extension Agents and its implications for the productivity of the organization (i.e. job engagement, job satisfaction, intent to turnover) and the health of the employee (physical and mental). The health of employees and its effect on the organization, in recent years, has become a fertile area of research and I am interested in examining this connection with the Extension occupation.

Numerous studies have examined the work-to family conflict and family-to-work conflict of various occupations and industries. The Extension occupation, however, has been somewhat neglected. It is my hope that this study will begin a dialogue of an important issue which has been surfacing for some time in our organization.

When my study begins in February, would you be willing to communicate to your employees the importance of participating in this study? A general e-mail would be sufficient. Encouraging your employees will help to increase my response rate, which as you know, is a very important component of rigor in any study.

Since this will be a national sample, only a small portion of the employees in your state will be involved. At this point in time, I do not have an exact date that this questionnaire will be launched, so please do not encourage your employees to participate in the study until I contact you again. It is very important that there be a minimal amount of time between when your employees receive your letter and when they receive my questionnaire.

I will be following The University of Tennessee policies on use of human subjects and will have my study approved by our Internal Review Board. Once it is approved, I will be happy to supply you with documentation, including the survey.

If you are willing to ask your employees to participate in my study, please reply to this letter. Also, I will draw a random sample of participants from the 2005 County Agents Directory, but I am fearful that, due to turnover, it will not be very accurate. Once my participants are selected, could I contact you to verify that they are still employed by your institution? If you have any specific questions concerning the study, I will be glad to discuss them with you. Thank you for your assistance.

Sincerely,

April B. Martin, M.S.
Extension Agent
DeKalb County
115 West Market St.
Smithville, TN 37166
Phone: (615)-597-4945
Fax: (615)-597-1421
Email: amartin3@utk.edu

Cc: Dr. Michael Lane Morris

SAMPLE LETTER PROVIDED TO ADMINISTRATORS

Dear Extension Professional:

As (director, dean, or administrator) of _____, I would like to encourage you to participate in a dissertation project being conducted by an Extension agent and doctoral student from Tennessee. Mrs. April Martin's research, entitled "Work-family conflict of Extension professionals as a predictor of organizational outcomes and employee health" will use a national sample (over 5,000) of Extension agents and their supervisors.

Our employees are our greatest asset. By examining how our work life both enriches and conflicts with our family life and vice-versa, Mrs. Martin hopes to begin a dialogue of an issue critical to Extension's future. The benefit for you participating in this research is that it will assist Extension at all levels in exploring how the work/family relationship can be improved for extension professionals so that Extension can continue to be a successful, thriving organization serving families in communities across the nation.

You will receive an email from Mrs. Martin within the next week inviting you to participate in her dissertation research. She will provide you with a link to her web-based survey which will take you approximately 30 minutes to complete. For those who wish to participate, there will be drawing for ten \$50 bank cards after the study is completed. Neither your name nor email address will be associated with the information you give in this web-based survey.

After Mrs. Martin has completed her research, she will provide each institution and participant with a summary of her findings, both on a national and state level.

Please consider contributing to this important study.

Sincerely,

APPENDIX E

LETTER OF ENCOURAGEMENT FROM PRESIDENT OF NATIONAL EXTENSION
ASSOCIATION OF FAMILY AND CONSUMER SCIENTIST (sent electronically)

You are receiving this email from NEAFCS because you are in our database. To ensure that you continue to receive emails from us, add info@neafcs.org to your address book today. If you haven't done so already, click to [confirm](#) your interest in receiving email campaigns from us.

Survey Participation Encouraged

Dear NEAFCS Member:

In the near future, Extension personnel across the country will receive a request from April Martin asking for participation in a survey. April is a 4-H and Adult Family and Consumer Science Agent in DeKalb County, Tennessee.

This survey is part of her dissertation research titled, "Work/Family conflict and work/family enrichment as predictors of organizational outcomes and employee health of Extension professionals."

As Extension employees, we can sometimes become overly stressed, becoming burned out in their jobs, struggling trying to juggle work/non-work, and ignoring their own health and wellness. April hopes this study will bring to the forefront an issue that Extension at all levels will begin to address.

I encourage you to consider completing this survey as it has the potential to provide data that will help all Extension workers. As an added bonus, April will have a drawing for 10 individual \$50 bank cards for those who participate.

Sincerely,

Carol Schlitt
NEAFCS President

LETTER OF ENCOURAGEMENT FROM PRESIDENT OF THE NATIONAL ASSOCIATION
OF COUNTY AGRICULTURAL AGENTS (NACAA) (sent electronically)

To: NACAA Members

From: N. Fred Miller, NACAA President

In the near future, Extension personnel across the country will be receiving a request from April Martin asking for participation in a survey. April is a 4-H and Adult Family and Consumer Science Agent in DeKalb County, Tennessee. This survey is part of a research project titled, "Work/Family conflict and work/family enrichment as predictors of organizational outcomes and employee health of Extension professionals."

April states that she continues to see co-workers stressed, becoming burned out in their jobs, struggling trying to juggle work/non-work, and ignoring their own health and wellness. She hopes this study will bring to the forefront an issue that Extension at all levels will begin to address. I encourage you to consider completing this survey as it has potential to provide data that will help all Extension workers.

LETTER OF ENCOURAGEMENT FROM PRESIDENT OF THE NATIONAL
ASSOCIATION OF EXTENSION 4-H

In the near future, Extension personnel across the country will be receiving a request from April Martin asking for participation in a survey. April is a 4-H and Adult Family and Consumer Science Agent in DeKalb County, Tennessee. This survey is part of her dissertation research titled, "Work/Family conflict and work/family enrichment as predictors of organizational outcomes and employee health of Extension professionals."

As Extension employees, we can sometimes become overly stressed, becoming burned out in their jobs, struggling trying to juggle work/non-work, and ignoring their own health and wellness. April hopes this study will bring to the forefront an issue that Extension at all levels will begin to address. I encourage you to consider completing this survey as it has potential to provide data that will help all Extension workers. As an added bonus, April will have a drawing for 10 individual \$50 bank cards for those who participate.

APPENDIX F

INITIAL INVITATION TO PARTICIPATE (sent electronically)

April B
Martin/DEKALB/EXT/UTIA
09/11/2007 06:37 PM

Dear Extension Colleague:

Your dean/director/administrator recently informed you of an on-line study I am doing with a national random sample of over 5,000 Extension professionals. You were randomly selected to participate in this study that I am conducting as a doctoral student at The University of Tennessee. The study entitled "Work-family conflict as predictors of organizational outcomes and employee health of Extension professionals" will examine how our work/family and work/life situations can be improved. Your dean/director/administrator has approved for me to invite you to participate.

If you choose to participate, you can voluntarily have your name entered into a drawing for **one of 10 \$50 bank cards!**

Because of your personal situation, (e.g., single, divorced, remarried, not a parent), you may be thinking that this study doesn't apply to you. This is not the case. We all have a life outside of our work and we all have families-whether they be immediate or extended. So, please do not let your unique family situation deter you from participating.

Thank you for your time and participation!

To participate in this study, please access the link below. You will be taken to a separate website to read confidentiality info, etc.

<http://dtccom.net/~gilbertapril/>

April B. Martin, M.S.
Extension Agent, DeKalb County
115 W. Market St.
Smithville, TN 37166
(615)-597-4945

EMAIL REMINDER 1 (sent one week after initial email)

From: April B Martin/DEKALB/EXT/UTIA <amartin3@utk.edu>
To: amartin3@utk.edu

Date: Monday, September 24, 2007 07:19PM
Subject: National Extension Work/Life/Family Study-April Martin-Reminder

Dear Extension Colleague:

Your dean/director/administrator recently informed you of an on-line study I am doing with a national random sample of over 5,000 Extension professionals. You were randomly selected to participate in this study that I am conducting as a doctoral student at The University of Tennessee. The study entitled "Work-family conflict as predictors of organizational outcomes and employee health of Extension professionals" will examine how our work/family and work/life situations can be improved. Your dean/director/administrator has approved for me to invite you to participate.

If you have already completed the on-line survey, simply delete this message and do not complete the survey again. If you have not, I would like to extend another invitation to you. To date, over 1,400 Extension professionals have participated! In order to reach my goal of a 50% response rate, I need 1,000 more. Your help would be very much appreciated. If you choose to participate, you can voluntarily have your name entered into a drawing for one of 10 \$50 bank cards!

Because of your personal situation, (e.g., single, divorced, remarried, not a parent), you may be thinking that this study doesn't apply to you. This is not the case. We all have a life outside of our work and we all have families-whether they be immediate or extended. So, please do not let your unique family situation deter you from participating. Thank you for your time and participation!

To participate in this study, please access the link below. You will be taken to a separate website to read confidentiality info, etc.
<http://dtccom.net/~gilbertapril/>

April B. Martin, M.S.
Extension Agent, DeKalb County

EMAIL REMINDER 1 (sent two weeks after initial email)

April B

Martin/DEKALB/EXT/UTIA
10/01/2007 11:57 AM

To amartin3@utk.edu

cc

Subj Final Reminder - National Extension
ect Work/Life/Family Study-April Martin

Dear Extension Colleague:

The on-line survey will be closing soon. This is the last reminder you will receive from me. If you have already completed it, simply delete this message and do not complete it again. To date over 1,600 Extension professionals have participated!

Your dean/director/administrator recently informed you of an on-line study I am doing with a national random sample of over 5,000 Extension professionals. You were randomly selected to participate in this study that I am conducting as a doctoral student at The University of Tennessee. The study entitled "Work-family conflict and work-family enrichment as predictors of organizational outcomes and employee health of Extension professionals" will examine how our work/family and work/life situations can be improved. Your dean/director/administrator has approved for me to invite you to participate.

If you choose to participate, you can voluntarily have your name entered into a drawing for one of 10 \$50 bank cards!

Because of your personal situation, (e.g., single, divorced, remarried, not a parent), you may be thinking that this study doesn't apply to you. This is not the case. We all have a life outside of our work and we all have families-whether they be immediate or extended. So, please do not let your unique family situation deter you from participating.

Thank you for your time and participation! To participate in this study, please access the link below. You will be taken to a separate website to read confidentiality info, etc.
<http://dtccom.net/~gilbertapril/>

April B. Martin, M.S.
Extension Agent, DeKalb County
115 W. Market St. Smithville, TN 37166

VITA

April Brooks Martin was born in Tazewell, Tennessee and graduated from Claiborne County High School in 1985. She received a Bachelor of Science degree in Vocational Home Economics Education from Berea College in Berea, KY in 1990. A Master's of Science degree was earned from The University of Tennessee in 2001.

April has worked for The University of Tennessee Extension since 1991 as a county extension agent in both Smith and DeKalb Counties.