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Operationalizing the Antecedents of Work-Family Positive Spillover: A Longitudinal Study

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DISSERTATION APPROVAL

The abstract and dissertation of Kristi Lynn Zimmerman for the Doctor of Philosophy in Applied Psychology were presented on June 12, 2009, and accepted by the dissertation committee and the doctoral program.

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ABSTRACT

An abstract of the dissertation of Kristi Lynn Zimmerman for the Doctor of Philosophy in Applied Psychology presented June 12, 2009.

Title: Operationalizing the Antecedents of Work-Family Positive Spillover: A Longitudinal Study.

The primary goal of the current study was to examine the antecedents of work-to-family and family-to-work positive spillover. This dissertation examined the relationship between work, family, and personal domain resources with the outcomes of work-to-family and family-to-work positive spillover. Specifically, five types of resources were tested as predictors of positive spillover as proposed by Greenhaus and Powell's (2006) theory of work-family enrichment. To test these relationships, constructs from the work and family domains were used to operationalize each of the proposed resources, and a longitudinal research design was applied in order to establish these resources as predictors of positive spillover. Data were collected from grocery store employees in the Midwestern United States as part of a larger study funded by National Institute for Occupational Safety and Health (NIOSH). The results of the study found the material resource of income adequacy as a longitudinal predictor of work-to-family positive spillover and parental status as

a cross-sectional predictor of family-to-work positive spillover. Overall, this study serves as a starting point in the understanding of the antecedents of positive spillover and help guide decisions about measurement, sample selection, and model development in future positive spillover research. These contributions to the literature are discussed along with the limitations and suggestions for the future of positive spillover research.

OPERATIONALIZING THE ANTECEDENTS OF WORK-FAMILY POSITIVE SPILLOVER: A LONGITUDINAL STUDY

by

KRISTI LYNN ZIMMERMAN

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Dedication

To my parents Robert and Karen Zimmerman for their unfaltering support, encouragement, and confidence throughout life and particularly during the past 4 years. I am forever grateful.

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CHAPTER I

Introduction

Over the past fifteen years, work-family research has been established as a significant element of the field of Occupational Health Psychology. However, as many researchers have observed, the majority of work-family research has focused solely on the conflict between the work and family domains, ignoring the idea that work and family roles may have beneficial and reciprocal effects on one another (Greenhaus & Parasuraman, 1999). This popular conflict perspective is guided by the scarcity hypothesis (Goode, 1960) which assumes individuals possess a fixed amount of time and human energy and that participation in multiple roles will result in more opportunity for conflict. More recently, there has been a call for research examining the positive effects of combining work and family roles. Ideas about the benefits of combining multiple roles originated in the early work of Sieber (1974) and others (e.g., Marks, 1977; Thoits, 1983). Marks and Sieber argued that the benefits of occupying multiple roles outweigh the costs. Marks proposed that participating in multiple roles could create energy rather than simply expend energy. Specifically, he argued that one role can create positive energy that carries over to other roles, thus energizing rather than draining the person. In sum, he suggested that a theory involving multiple role occupation should not view energy as finite and should acknowledge the benefits as well as the drawbacks of multiple roles.

Furthermore, recent literature has offered support for the idea that this positive effect contributes substantially and differentially to the prediction of work and nonwork outcomes over and above the effects of conflict (Van Steenbergen, Ellemers, & Mooijaart, 2007). Thus, with the popularity of this idea growing, research has introduced several operationalizations of the positive spillover meta-construct including work-family positive spillover (e.g., Crouter, 1984, Edwards & Rothbard, 2000, Hanson, Hammer, & Colton, 2006), work-family facilitation (Grzywacz, 2002), and work-family enrichment (Greenhaus & Powell, 2006; Carlson, Kacmar, Wayne, & Grzywacz, 2006) to describe the theoretical relationships and mechanisms that enable work and family to benefit one another.

The recent attempts of research to emphasize the positive aspects of combining work and family have found positive spillover to be associated with important outcomes such as improved health and increased role satisfaction (e.g., Grzywacz & Marks, 2000; Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005; Wayne, Grzywacz, Carlson, & Kacmar, 2004). However, it is important to note that research on the outcomes associated with positive spillover has been much more prevalent than that examining the antecedents of positive spillover and that at the present, little is known about the antecedents of positive spillover. Thus, as the interest in these antecedents and outcomes of positive spillover has increased, researchers have developed theoretical models to aid in the development of this construct (e.g., Greenhaus & Powell, 2006; Wayne, et al., 2007).

With this is mind, the overarching goal of this dissertation was to focus explicitly on the antecedents of positive spillover in an attempt to fill this gap in the positive spillover literature. Specifically, five types of resources were tested as predictors of positive spillover as proposed by Greenhaus and Powell's (2006) theory of work-family enrichment. To test these relationships, constructs from the work and family domains were used to operationalize each of the proposed resources, and a longitudinal research design was applied in order to learn more about these resources as predictors of positive spillover. Greenhaus and Powell's model will be described in greater detail in Chapter III. Thus, I will begin by introducing the overarching study of positive psychology and then highlight the importance of work-family research and specifically that of work-family positive spillover. I will then offer a brief review of the general theories that have been used to develop this construct followed by an overview of the positive spillover construct itself. Finally, I will provide an explanation of the most current theoretical models of work-family positive spillover and develop hypothesized predictive relationships between operationalized resources and both directions of work-family positive spillover over time (work-to-family and family-to-work).

The Positive Psychology Movement

The positive psychology movement was started by Seligman and Csikszentmihalyi (2000) with the publication of their seminal article entitled "Positive Psychology, an Introduction." Positive Psychology is a branch of psychology that places emphasis on the study of positive emotions, strengths, character, and healthy

institutions. It is the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups and institutions (Seligman & Csikszentmihalyi). The premise behind the positive psychology movement is the idea that the science of psychology has made great strides in understanding what goes wrong in individuals, families, groups, and institutions, but these advances have come at the cost of understanding what is right with people (Gable & Haidt, 2005). Thus, the focus of positive psychology is not just fixing what is broken but nurturing what is best (Seligman & Csikzentmihalyi).

Similarly, the idea of examining the positive side of work has recently come into play in organizational psychology research with regards to the study of work engagement (Schaufeli & Bakker, 2004). Work engagement has been defined by researchers as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption and is considered the "positive antipode" of burnout (Schaufeli & Bakker). Work engagement corresponds to optimal functioning and human strength, whereas burnout corresponds to what has been traditionally focused on in psychology, human weakness and malfunctioning in the form of disease, disability, disorder, and damage (Seligman & Csikszentmihalyi, 2000). Work engagement is not only a phenomenon studied in the research but has also become a useful concept in organizational practice. Largely as a result of recent work published by the Gallup Organization, employee engagement has become a buzz word in many organizations. Research published by Gallup and others has shown that engaged employees are more productive employees. The research also proves that

engaged employees are more profitable, more customer-focused, safer, and more likely to withstand temptations to leave (Gallup Research Institute, 2008). Thus, it is important to recognize this increasingly popular movement of both research and practice towards a better understanding of the positive aspects of the individual and the workplace.

Finally, in work-family research and practice, the concept of positive spillover also finds a place within the realm of positive psychology. With the work-family positive spillover construct, we narrow our focus to emphasize employee strengths that are explicitly obtained through resources which aid in the integration of work and family (Greenhaus & Powell, 2006). Before entering a detailed discussion of the positive spillover construct, it is important to review the work-family literature and highlight the importance of positive spillover for working men and women.

The Work-Family Interface

The relationship between work and family can be explained starting with the early interests in work and leisure and continuing into the current state of the world and the effects of the changing nature of work on working men and women. This section will begin by elaborating on the history of work and leisure followed by a review of the current changing nature of the working world and the subsequent effects on the work-family interface. Next, I will discuss the practical significance of work-family research in organizations and provide some examples of how organizations strive to minimize conflict and facilitate a "balance" between work and family. Finally, I will provide some insight into the sample that will be used in the proposed

dissertation through a review of the job demands and stressors associated with grocery employment.

History of Work and Leisure

In order to understand the importance of work-family research for working men and women, it is helpful to review the origin of this concept beginning with a history of work and leisure. An understanding of the distinction between work and non-work has been of interest since beginning of time with the historic division between work and leisure (Veal, 2004). Specifically, the concepts of work and leisure can be observed in early hunter-gather societies where membership in the elite was associated with exemption from work which created the status divide between work and leisure that was seen in this society (Veal, 2004). As a contributor to modern attitudes towards work and leisure, ancient Greek philosophers celebrated the life of leisure and looked down on manual work as an activity fit only for non-citizens and slaves. These negative attitudes towards work continued into Roman times as a wide range of occupations were thought to be "unbecoming to a gentleman...and vulgar" (Veal, 2004 p. 19). These occupations included tax-gatherers, all hired manual laborers, mechanics, shopkeepers, butchers, cooks, and fisherman. However, the farmer was always held in high esteem during ancient Greek and Roman eras. With the Renaissance period came the establishment of the modern world which included ideas of economic progress, increased structure around work and leisure time, and increasing material rewards (Veal, 2004).

The contemporary era introduced ideas of simplifying work including the popular concept of scientific management accompanied by Henry Ford's practice of such principles. This routine approach to work and the division of labor came to be known as "Taylorism" or "Fordism" and dominated industrial thinking for the rest of the century (Veal, 2004). With the 1930s came anticipation of a reduction in working hours brought about by technology but the Second World War brought this speculation to an end and the war effort reestablished work as the primary sphere (Veal, 2004).

By the 1960s, a diminishing memory of war was accompanied by a fall in working hours and a renewed talk of a leisure society in the form of increased holiday entitlements. However, the 1970s hit the west with a fear of globalization trends and by the 1990s working hours in some Western countries stopped falling, and even began to rise again (Veal, 2004). Thus, talk of the leisure society all but disappeared. It is apparent that the balance between work, leisure, and material needs has experienced much variance over time both quantitatively and qualitatively, and has been influenced by culture, religion, technology, and social and economic structures.

Shifting to a focus on the U.S., various views regarding work and leisure still exist today. For example, Schor (1991) argued that American workers are accumulating more hours at the workplace than their parents or grandparents, thus producing an unexpected decline of leisure time. This argument is often referred to as the overworked-American thesis (Schor, 1991). In contrast Robinson and Godbey

(1997) argue that Americans now work less and have more free time than they did in the mid-1970s and that free time is likely to increase even more in the future. In an attempt to reconcile these opposing viewpoints, Jacobs and Gerson (2001) conducted a study that took the differences in family composition of workers into account.

Jacobs and Gerson's (2001) research analyzed the March Annual Demographic Files of CPS from 1970 and 1997 and found that the bulk of change over time is not the result of increased working time but is a reflection of changes in family composition and growth of dual-earner couples. Results showed that although overall changes in working time are modest, the past several decades have seen an increase in dual earner couples who work a combined 100 hours or more a week. This is specifically the case for those individuals who are highly educated or hold prestigious jobs. In addition to these various perspectives on work and leisure, there are several social and demographic changes affecting the relationship between work and family. The next sections will highlight these changes and discuss the practical significance of emphasizing work-family facilitation in organizations.

Current Social and Demographic Changes

As highlighted by Hammer and Zimmerman (forthcoming), the current state of our country brings to light several changes affecting the work and family lives of individuals. These changes include demographic, social, technological, and economic changes that have occurred in the U.S. over the past 50 years and have changed family life, work, and the labor market. Specifically, the aging of the population, along with

the increasing number of women in the workforce, and an increase in multigenerational households have impacted the way that we work and our expectations of what we need from organizations in terms of supporting work-life demands. In addition, the change in work hours, location, and control over work hours has led to changes in the demands of work and family and in the way that workers manage their multiple roles.

According to the U.S. Department of Labor (1999), this idea of "flexibility and family" is one of the major challenges facing workers and employers in the 21st century. An increasing number of dual career and single parents are entering the workforce and the care giving needs of the aging populations are rising (Hammer & Zimmerman, forthcoming). In addition, the Families and Work Institute reported that work-life balance was ranked among one of the most important factors considered by individuals in accepting new positions (Parasuraman & Greenhaus, 1997). Thus, in order for organizations to attract and retain the most employees, attention must focus on the relationships among the interdependencies of the work-family interface. This will provide employers with an opportunity to understand how to create greater job satisfaction among employees and improve both individual and organizational performance (Stoddard, 2008).

A popular focus when discussing the work-life interface in organizations is on work-family conflict and the numerous demands that exist in both the workplace and at home (Greenhaus & Powell, 2006). Research has shown that increased levels of

work and family demands are associated with higher levels of conflict between the work and family domains. Voydanoff (2007) highlights several within-domain demands in both the work and family domains that are related to both decreased performance in the opposite role and higher levels of work-family conflict. As an example from the work domain, nonstandard work schedules may serve as a demand that prohibits individuals from having the time to participate in family activities. In addition, job pressure, workload, and job insecurity are also work-domain demands experienced by many workers. In 1997, 68% of workers in a national sample reported that their jobs required them to work very rapidly, compared with 55% in 1977 (Voydanoff). These types of work demands have been shown to yield outcomes in the family domain including decreased marital and life satisfaction as well as health outcomes such as depression and decreased general well-being (Eby et al., 2005). Similarly, family demands, including time spent caring for children and elderly parents, marital conflict, child behavioral problems, and caregiver strain have also proven to lead to decreased levels of work role performance. For example, a recent study found that parents' emotional problems associated with children's physical health problems are associated with parents' limited productivity at work (Grzywacz et al., 2005).

Another important area of research to highlight when discussing the family demands involves the population of individuals that are parents of children with mental and physical health disorders. Employed parents caring for children with disabilities often find the integration of work and family responsibilities very

challenging (Kagan, Lewis, & Heaton, 1998; Rosenzweig, Brennan, & Ogilvie, 2002). Evidence indicates that parents of children with mental and health disorders face even greater challenges meeting both employment and family responsibilities than do other caregivers (Rosenzweig & Brennan, 2008). As an example, in a survey of caregivers of children with mental health disorders, 48% reported having to quit their job at some point to care for their child and 27% reported being terminated because of child-related work disruptions. In addition, 13.5% of families caring for children with special needs reported spending 11 or more hours per week coordinating health care for their children (Child and Adolescent Health Initiative, 2004). The family-related demands placed on these parents can often result in psychological distress and caregiver strain. Psychological distress refers to an elevation of psychiatric symptoms such as depression and anxiety whereas caregiver strain refers to events, occurrences or feelings specifically related to the demands of caring for a child with emotional or behavioral disorders (c.f. Rosenzweig & Brennan).

Rosenzweig and Brennan (2008) highlight the importance of both family supports and work supports needed by working parents in order to minimize these detrimental outcomes associated with this caregiver strain. Family support is identified through seven key family domains including, family relations, mental health, employment, childcare, education, economic arrangements, and community involvement. On the other hand, examples of workplace supports include family-friendly organizations, flexibility and workplace culture, and support from the supervisor and coworkers. The five types of resources that will be proposed in this

dissertation can be directly tied to these types of family and work supports. Specifically, workplace culture will be examined as a flexibility resource, economic arrangements as a material resource, family support as a social capital resource, mental health as a psychological resource and education as skills and perspectives.

An increased awareness of the negative outcomes associated with various work and family demands has triggered an increase in family-supportive policies and initiatives in the workplace. Family supportive organizational policies and practices have been designed to reduce the negative effects of work-family stress and conflict on employee health and well-being (Hammer, Neal, Newsom, Brockwood, & Colton, 2005b). These types of family supportive policies are examples of our attempts to minimize the demands that lead to work-family conflict. Although it is important to focus on minimizing conflict using these types of supports, the current dissertation shifts the literature towards the idea of maximizing resources, not only to counteract these demands, but also to create positive cross-domain outcomes.

Thus, with workers striving to achieve a balance between their work and family lives, it is important to acknowledge that resources exist in both the work and family domains that can facilitate cross-domain productivity and work-life balance. Voydanoff (2007) recognizes boundary spanning resources that address how work and family connect with each other in terms of boundary flexibility. Examples of work-based boundary-spanning resources include the availability of workplace policies and programs that increase the flexibility of the boundary between work and home.

Family-based boundary-spanning resources may stem from spouses who can increase the ability of their partners to meet work demands by offering support with household activities and child care responsibilities. Later, I will distinguish between the work-based and family-based resources to be tested in the proposed dissertation but first I will move to a discussion of the significance of studying work and family in the retail grocery population to be used in the proposed study.

Characteristics of the Grocery Industry

This dissertation will be examining the proposed relationships in a sample of grocery store workers. With this in mind, it is important to highlight the characteristics of the grocery industry and discuss the relevance of the work-family interface within this population. According to the Bureau of Labor Statistics (2008), grocery stores are open more hours and days than most establishments and as a result, employees are expected to work non-traditional early morning, late night, weekend, and holiday shifts. The workweek for nonsupervisory workers averages at about 29.8 hours and nearly 32% (48% in current sample) of employees work part-time schedules. Research has shown significant differences between part-time and full-time retail workers in the areas of organizational commitment and other job attitudes with full-time workers reporting higher levels commitment and satisfaction. This has been attributed to the idea that part-time workers have varying frames of reference or levels of investment in the employment relationship (Sinclair, Martin, & Michel, 1999). Further, with regards to hours worked, Broadbridge (1999) reported that retail

workers feel a certain amount of acceptance associated with long work hours and believe that a career in retailing is synonymous with long, and sometimes, unsociable hours. One worker noted, "Long hours do have an effect on the quality of your personal life, but it's part of being in retail" (Broadbridge, 1999).

With regards to the physical work environment, most grocery stores are clean, well-lighted, and climate controlled but can at times become very hectic and dealing with customers can be stressful (Bureau of Labor Statistics, 2008). The stressful environment of the grocery industry has often been attributed to the various demands associated with the job. For example, Broadbridge, (1999) examined the stress relationship in a group of retail workers (75% worked in the grocery industry) and found that demands experienced by retail managers originated from job characteristics such as change and uncertainty, pressure to meet deadlines, resource constraints, and demanding customers. Further, Broadbridge (1999) explored retail stress at work and the effects of this stress on the work-family interface. Retail workers reported a considerable amount of tension between their work and home environment resulting from work overload, long hours, time pressures, and staff shortages. They found that in both male and female retail managers, work demands were more likely to interfere with home life than vice versa. Further, the retail managers in this study spoke about how work demands affected their days off and holidays. Many managers reported feeling preoccupied with work on days off or holidays and reported carrying cell phones or pagers at all times so they could always be contacted (Broadbridge, 1999).

Further, it is common for retail workers to report role stress as a result of conflicting demands between serving customers and their level of flexibility on the job (Wetzels, Ruyter, & Bloemer, 2000). According to Wetzels et al. (2000), role stress is particularly relevant in retail services as the job is characterized by extensive customer service and little control by the worker. Role stress has been shown to have a negative impact on organizational commitment, retail personnel's commitment to quality and perceived service quality (Wetzels et al.2000). With the grocery employment characterized by these many demands and stressors, this dissertation emphasizes the importance of revealing resources that can be offered to these types of workers in order to counter the effects of the demands and create positive cross-domain outcomes.

With regards to the safety of grocery employment, in 2006 cases of work-related injury and illness averaged at 6.2 for every 100 full-time workers as compared to 4.4 for every 100 workers in the entire private sector. Injuries may occur while workers transport or stock goods or when cashiers working on traditional cash registers become vulnerable to cumulative trauma and other repetitive motion injuries (Bureau of Labor Statistics, 2008).

Further, grocery stores are ranked among the largest industries in 2006 as they provide 2.5 million wage-and-salary jobs. Jobs within the industry range from sales-related occupations such as cashiers to administrative positions such as bookkeepers and customer service representatives. Production occupations include butchers,

bakers, and meat cutters and transportation and material moving occupations include freight, stock, and material movers as well as packers and packagers. Average weekly earnings in grocery stores are considerably lower than the average for all industries, reflecting the large proportion of entry-level, part-time jobs. In 2006, nonsupervisory workers in grocery stores averaged $328.26 a week, compared with $567.87 a week for all workers in the private sector (Bureau of Labor Statistics, 2008). Full-time workers generally receive typical benefits, such as paid vacations, sick leave, and health and life insurance. Part-time workers who are not unionized may receive few benefits. Unionized part-time workers sometimes receive partial benefits. Twenty percent of all employees in grocery stores belong to a union or are covered by union contracts, compared with 13 percent in all industries. The United Food and Commercial Workers International Union is the primary union representing grocery store workers (Bureau of Labor Statistics, 2008).

With regards to family obligations, 60% of grocery store workers fall into the age range of 20-44 (Bureau of Labor Statistics, 2008). Based on this age range, it is logical to assume that many of these individuals have family responsibilities outside of work, thus emphasizing the importance of the work-family interface in this group of workers. Although the formal types of family-friendly supports such as flextime and telecommuting are not a realistic option in the grocery industry, there are other types of informal supports and job characteristics that may act as resources to these employees. Specific to the proposed study, the amount of skill discretion or decision authority afforded on the job can act as a resource as employees are given flexibility to

decide the manner in which they conduct job task. This decision latitude resource may be more relevant for administrative or production positions than for cashier positions which allow less room for flexibility in conducting job tasks. Related to all positions within the grocery the degree of family-supportive culture may also act as a facilitating resource. With this grocery chain often thought of as lacking flexibility with regards to flexible schedules and even pre-approved schedule changes, the proposed dissertation aims to identify specific resources that exist even in routine and low wage positions that can facilitate outcomes in the family domain.

In addition to general characteristics of the grocery industry, there are aspects of the grocery chain surveyed for the current study that are important to acknowledge. Employees within these stores are given very little flexibility with regards to schedule changes. Often times schedule changes made several weeks in advance will not be honored and employees are prohibited from switching schedules with one another unless an emergency situation occurs. This type of strict scheduling creates even less flexibility than traditional retail occupations and enhances the difficulty in balancing work and family. Further, employees do not have the option to make personal phone calls during work hours making it difficult to stay in touch with family members and creates a boundary between work and family. Overall, from my experience interviewing employees and spending time in the stores, I came to the conclusion that employees tend to segment work and family due to the lack of support and flexibility offered from the organization. They are given very little opportunity to create a

balance between the work and family domains and as a result, they choose to keep work and family as separate domains.

Work-Family in Practice

From the perspective of the organization, work-life balance has been the predominant phrase used to describe the relationship between work and home life. In addition, many developmental activities and training modules have been created to help employees balance their lives at work with their lives outside of work. However, as pointed out by Hill et al. (2007), the work-life balance metaphor is limited as it conceptualizes work and home as a zero-sum game. That is, when something is given to work (e.g., time and energy), it is seen as taking away from the home and vice versa. Thus, training and development focuses on minimizing the conflict between work and home rather than emphasizing the facilitation between these two domains. A key implication of facilitation research is to suggest a paradigm shift that focuses work-home training and developmental activities on facilitation rather than conflict and to emphasize that work and home life are in many ways complementary, rather than competing, priorities (Hill et al. 2007). For example, in management training, the facilitator might highlight how the management communication skills being taught at work can help the employee to communicate more effectively with their teenage children at home.

The previous review of the work-family interface highlights the current social and demographic changes affecting work and family, brings to light several reasons

why it is important to study this concept in grocery employment and highlights the practical significance of work-family facilitation. It is clear that work-family facilitation is related to important implications for working men and women as well as bottom line work outcomes for organizations (e.g., recruitment incentives, retention, etc). Thus, the current study is focused on understanding the mechanisms that create this facilitating effect and specifically, what types of resources exist in the work and family domains that influence outcomes in the opposite domains. The theoretical model is based on the work of Greenhaus and Powell (2006) and proposes that resources in the work and family domains as well as personal resources that are non-domain specific are expected to facilitate positive cross-domain outcomes (See Figure 1). Specifically, resources measured at the first data collection time point are expected to have a positive effect on the level of work-to-family and family-to-work positive spillover measured at the second data collection time point.

An understanding of the mechanisms that generate positive spillover will contribute to the work-family literature in several ways. The current study examines the positive side of the work-family relationship and emphasizes a focus on the mechanism of resources facilitating work and family rather than demands conflicting with the work and family domains. In addition, this study is one of the first to test the resources proposed by Greenhaus and Powell (2006) and provides several recommendations for testing this model going forward. Finally, the current study employs a cross-sectional and a longitudinal research design in order to learn more

about the causality of the relationships between resources and positive spillover and how these relationships manifest differently across time versus concurrently.

With this is mind the next two chapters will provide background and rationale for the development of the positive spillover concept. Before defining the concept of positive spillover and the various constructs used for its operationalization, it is important to review the theoretical roots underlying this concept. Thus, we turn to a review of role theory (Katz & Kahn, 1978) and ecological systems theory (Bronfenbrenner, 1974).

CHAPTER II

Theoretical Roots

The construct of work-family positive spillover is often understood through the framework of two notable theories in the work-family literature. Specifically, I am referring to role theory (Katz & Kahn, 1978) which is often viewed as the origin of spillover research and ecological systems theory (Bronfenbrenner, 1974) which takes a systems perspective to understanding the various domains of one's life. Each theory will be reviewed in relation to the work-family interface with a particular emphasis on the positive spillover construct.

Role Theory

A dominant theoretical perspective that has been used to explain the relationship between work and family is role theory (e.g., Katz & Kahn, 1978). Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964) suggested that roles are the results of expectations that others hold about appropriate behavior in a particular situation. Role conflict is described as the psychological tension that is aroused by conflicting role pressures. According to role theory, conflict will occur when individuals engage in multiple roles that are incompatible (Katz & Kahn, 1978).

As mentioned previously, the two predominant perspectives within role theory for describing the relationships between work and family are the scarcity hypothesis (Goode, 1960) and the enhancement hypothesis (Sieber, 1974). The scarcity

hypothesis, which has guided most work-family studies, assumes that human energy is a limited resource and that engaging in multiple roles will result in greater opportunity for conflict (i.e., work-family conflict). In contrast, the enhancement hypothesis proposes that occupying multiple roles can be beneficial (i.e., work-family positive spillover). Specifically, multiple roles generate more resources and opportunity for energy to be recharged through enhanced self-esteem (Marks, 1977). Work-family conflict stems from the idea of role conflict and is defined as a type of interrole conflict in which the role demands stemming from one domain (work or family) are incompatible with role demands stemming from the other domain (family or work; Greenhaus & Beutell, 1985).

While work-family conflict has its roots in the scarcity hypothesis, positive spillover stems from the enhancement hypothesis. Research has found that individuals report rewards and benefits of multiple role participation (e.g., Ingersoll-Dayton, Neal, & Hammer, 2001, Piotrkowski, 1979, Yogev, 1981). These benefits include reduced psychological distress (Pietromanoco et al., 1986; Thoits, 1983), increased job satisfaction (Pietromanoco et al.), improved work outcomes (Ingersoll-Dayton et al.), and improved health outcomes (Collijn, Appels, & Nijhuis, 1996; Crosby, 1991; Repetti, Matthews, & Waldron, 1989). When comparing the scarcity and enhancement hypotheses, research has concluded that these two hypotheses are not mutually exclusive and that both stressors and rewards spill over from one role to another. As stated by Friedman and Greenhaus (2000), work and family are both

"allies" and "enemies," in that resources and emotions can be shared across domains, but can also be depleted by an over-demanding role.

Most recently, Van Steenbergen et al. (2007) demonstrated that positive spillover contributes to the prediction of work and nonwork outcomes above and beyond work-family conflict. Specifically, they found that including four types of facilitation (energy-based, time-based, behavioral, and psychological), substantially improved the prediction of work outcomes (e.g., job performance, affective commitment, and work satisfaction) and nonwork outcomes (e.g., home performance, home commitment, home satisfaction, and global life satisfaction) above and beyond the effects of conflict. These results reveal the importance of viewing these constructs as distinct mechanisms rather than existing along the same continuum.

Bidirectional Nature of Spillover

In addition to recognizing conflict and facilitation as separate constructs, research in the work-family domain has emphasized the importance of distinguishing between the two directions of work-family spillover in which work interferes with or facilitates family as well as family interfering or facilitating with work (Frone, Russel, & Cooper, 1992). Literature suggests that work-to-family spillover may have different antecedents and outcomes than family-to-work spillover (Frone, 2003). Frone et al. (1992) tested their model and demonstrated how work-related demands are most often associated with work-to-family conflict and family-related demands are most often associated with family-to-work conflict. That is, stressors in one domain are often

related only to conflict originating in that same domain. For example, job stressors were predictive of work-to-family conflict, whereas family stressors and family involvement were predictive of family-to-work conflict (Frone et al, 1992, 1997). However, other researchers have demonstrated how the effects of the conflict can occur in the opposite domain from the originating stressor (e.g. Kossek & Ozeki, 1998). It is important to recognize that regardless of the direction of the interference, work-family spillover is triggered by simultaneous pressures or demands in both roles (Greenhaus, Allen, & Spector, 2006).

In the positive spillover literature, Carlson, Kacmar, Wayne, and Grzywacz (2006) offer a host of reasons why it is important to differentiate between work-to-family and family-to-work positive spillover. They suggest that the resources forged by one domain may be different from those initiated by another. For example, some of the benefits and privileges derived from involvement in one's work, such as income, may not be derived from involvement in one's family, and vice versa. Thus, different types of resource gains may or may not be equivalent across domains. They also note that positive spillover can occur bidirectionally such that work can provide resources that result in enhanced functioning in the family domain (work-to-family positive spillover) or family can provide resource gains that lead to enhanced individual functioning in the work domain (family-to-work positive spillover). This framework will be used in the development of this dissertation's hypotheses.

This review of role theory is central to understanding the historical roots of the positive spillover construct as well as the differentiation between the two directions of spillover. Next, I will turn to an explanation of ecological systems theory which has recently become a useful theoretical framework in the exploration of work-family positive spillover.

Ecological Systems Theory

In addition to role theory, systems theory provides a useful framework for understanding the integration of work and family. Specifically, with the introduction of Ecological Systems Theory, Bronfenbrenner (1977) argued that human development could be examined within four interrelated systems (See Figure 2). The first is the *microsystem*, which includes the individual and his/her immediate settings, such as home, school, or work. According to systems theory, the interrelationship between microsystems yields another level called a mesosystem. The interactions between work and family settings would be an example of a mesosystem and as a result, the majority of work-family research is focused primarily on this level (See Figure 2). The next level is the *exosystem*, which expands upon the mesosystem by including other social structures which influence behavior. These structures can be both formal (e.g., government, the corporate world) or informal (e.g., social networks, media influences). The *macrosystem*, encompasses the economic, social, educational, political, and other systems that influence interactions in all of the other subsystems. These are societal-level patterns that reflect the values of a particular culture and

thereby exert influence on the lower level systems. For example, in the United States, value is placed on an organization's or person's monetary worth. Thus, in our society, the importance and esteem of a business executive is often placed above that of a teacher or caregiver. These social values influence the behaviors and decisions of individuals, families, and organizations. In his later work, Bronfenbrenner (1986) introduced a fifth system, the *chronosystem,* which is the idea that there is an evolution of the external systems over time.

By making these four levels explicit, researchers can examine the system level that most appropriately fits their own field. Psychologists, who are generally more interested in individual outcomes, tend to focus more on the micro- and meso-systems. Sociologists may be more inclined to examine exosystem influences, whereas economists and public policy makers may be more concerned with the macrosystem. This is not to say, however, that a researcher will study only one system. Due to the fact that systems are interrelated, understanding is enhanced when all systems are given due consideration.

Grzywacz and Marks (2000a) used Bronfenbrenner's (1977) ecological systems theory as a framework to examine correlates of positive and negative spillover between work-family microsystem. Specifically, using Bronfenbrenner's theory, they suggest that the work-family experience is a joint function of process, person, context, and time characteristics and that each type of characteristic exerts an additive, and potentially interactive, effect on an individual's work-family experience (Grzywacz &

Marks, 2000a). They found that individual and contextual factors interact to influence the amount of work-family spillover that individuals experience. Some studies, such as Hammer et al. (1997) have used certain systems principles by including couple-level data, but did not use family systems theory as a basis for the study. Family systems theory provides a model for understanding the organizational complexity of families, as well as the interactions among family members (Anderson & Sabatelli 1999). Westman, Etzion, and Danon (2001) used a systems perspective when examining the reciprocal effects that marital partners have on one another. Other studies, such as Berry and Rao (1997), utilized a systems framework to examine work-family stress in fathers, but neglected to include data from the partners of the fathers. Similarly, Wayne et al. (2007) used ecological systems theory as a piece in the development of their Resource-Gain-Development perspective to understanding the antecedents and outcomes of positive spillover.

Finally, Voydanoff (2007) used ecological systems theory to examine work, family and community as microsystems consisting of networks of face-to-face relationships. She suggested that relationships among microsystems may operate through linking mechanisms and proposed a conceptual framework for the differential salience of within-domain demands and resources (See Figure 3). She proposed that within-domain demands and resources are differentially salient in relation to work-family conflict and facilitation. The framework posits that within-domain demands are positively related to work-family conflict, whereas within-domain resources are positively associated with work-family facilitation. Specifically, within-domain work

resources are positively associated with work-to-family facilitation and within-domain family resources are positively associated with family-to-work facilitation. Within-domain demands are salient for work-family conflict because they are associated with processes that limit the ability of individuals to meet obligations in another domain. Within-domain resources are relatively salient for work-family facilitation because they engender processes that improve one's ability to participate in other domains.

As reviewed above ecological systems theory is a commonly used theory to build a rationale for models of positive spillover (e.g., Grzywacz & Marks, 2000a; Voydanoff, 2004; Wayne et al., 2007). Both role theory and ecological systems theory form the basis for the idea of positive spillover and will be referred back to throughout the remainder of this proposal. At this point I will turn from the overarching theories to a more focused discussion of positive spillover beginning with an account of the concept's development over time followed by a review of the various constructs used to operationalize this complementary relationship between work and family as proposed by the literature.

CHAPTER III

Positive Spillover

Before moving into a detailed discussion of Greenhaus and Powell's (2006) model of work-family enrichment, it is important to define the meta-construct of positive spillover, review the various ways of operationalizing positive spillover, and provide an overview of the research examining the antecedents of this concept.

Defining Work-Family Positive Spillover

Construct Development

As noted previously, the majority of work-family research has focused on the conflicts people experience when the demands of the work and family roles spillover from one to another. However, for roughly 30 years, theorists have recognized that positive spillover also occurs between work and family roles, in that one role can enhance the other. Dating back to the work of Marks (1977) and Sieber (1974), it has been argued that the benefits of occupying multiple roles outweigh the costs. Marks suggested that multiple role occupation could create energy rather than simply expend energy. He argued that a theory involving multiple role occupation should not view energy as finite and should acknowledge the benefits as well as the drawbacks of multiple roles. In fact, he suggested that one role can create positive energy that carries over to other roles, thus energizing rather than draining the person. Early spillover research reported that individuals describe rewards and benefits of multiple role participation (e.g., Piotrkowski, 1979, Yogev, 1981). These benefits include reduced psychological distress (Pietromanoco et al., 1986; Thoits, 1983), increased job

satisfaction (Pietromanoco et al.), and improved health outcomes (Collijn, Appels, & Nijhuis, 1996). Specific to health outcomes, Repetti, Matthews and Waldron (1989) concluded that employment was associated with improved health for single and married women who held a positive attitude toward employment and Crosby (1991) found that working mothers report that the rewards of juggling multiple roles tend to outweigh the costs, and women who juggle multiple roles are less depressed than other women.

An early conception of the work-family interface was offered by Staines (1980) who proposed three mechanisms for understanding the relationship between work and family roles to include segmentation, compensation, and spillover. The segmentation model postulates that work and family life represent independent domains that do not influence one another. On the other hand, the compensation model suggests a negative relationship between work and family. Specifically, increasing dissatisfaction in one life domain (e.g., family) leads to a reduction of time and energy to that role, which then leads to an increase in time and energy devoted to a second life domain (e.g., work) in effort to compensate for the lack of rewards or for undesirable experiences in the first life domain (e.g., family; Frone, 2002). Finally, the spillover model postulates a positive relationship between work and family such that a change in one domain leads to a related change in another domain. It became important to point out that spillover can be negative, such as bad experiences at work that lead to negative experiences at home or positive such that positive family experiences lead to positive work experiences. Thus, the concept of positive spillover emerged.

Crouter (1984) expanded on the work of previous researchers with the proposition that positive spillover is not limited to energy exchanges and argued for two additional forms of positive spillover. The first is psychological spillover, in which positive mood or enhanced feelings of self-esteem from one role can affect mood in another role. The second form is educational spillover, where skills gained and knowledge learned in one sphere can be used in the other. Examples of such skills include empathy, interpersonal skills, and time management. She argued that psychological spillover was much more transitory in nature, whereas educational spillover was more stable and occurred over longer periods of time (Crouter, 1984).

In addition, Crouter (1984) was one of the first researchers to examine positive family-to-work spillover. Crouter conducted interviews with 55 employees at a large manufacturing plant to identify themes associated with both positive and negative spillover. For positive spillover, two major themes emerged: (1) the supportive nature of family relationships, and (2) skills and attitudes acquired at home which could be useful in other settings, such as empathy or interpersonal skills. The researchers then compared overall spillover (negative spillover minus positive spillover) between groups of employees who had a variety of work and family situations (e.g., gender, parental status). Specifically, at the time there were suggestions in the literature that individuals may differ in their view of the work-family relationship based on factors such as gender, marital status, parental status and type of occupation. Thus, they selected a sample that had adequate variation along these dimensions. Resulting from the comparison of negative and positive spillover, mothers reported less positive

spillover (i.e., more negative spillover) from family-to-work than fathers, but there was no significant gender difference between nonparents (Crouter, 1984).

At this point, the concept of positive spillover had been established in the work-family literature but there were many unanswered questions with regards to the predictors and outcomes of this construct. Further, research trends showed a peaked interest in the various ways of operationalizing the positive spillover meta-construct. Thus, I will now review the most popular ways of opertationlizing the positive spillover meta-construct and their current definitions as provided by the literature.

Operationalizing Work-Family Positive Spillover

As mentioned above, it is important to recognize that a variety of construct names have been proposed to describe the benefits of participating in both work and family including *work-family positive spillover* (Edwards & Rothbard, 2000), *work-family facilitation* (Grzywacz, 2002), and *work-family enrichment* (Greenhaus & Powell, 2006). As noted by Hanson, Hammer, and Colton (2006), the distinction between these various terms is not well understood and several different viewpoints can be taken on how these various operationalizations fit together. The perspective that will be taken in this dissertation proposes work-family positive spillover as a meta-construct with the various operationalizations fitting within the overarching construct (e.g., facilitation, enrichment).

The overarching idea of spillover that is positive in nature has manifested itself in the meta-construct of positive work-family spillover. Edwards and Rothbard (2000) contributed to the explanation of positive spillover by offering four types of positive

spillover and the processes by which these different types of spillover may occur. The four types of spillover include mood, values, skills, and behaviors and each of these occur from work to family and family to work. Mood spillover occurs when mood in one domain affects mood in the other domain. This can be in the form of positive mood spillover in which positive moods enhance cognitive functioning, increase task activity, and promote positive interactions with others, each of which facilitates role performance (Staw, Sutton, & Pelled, 1995). For example, a positive interaction that a mother has with her child in the morning can create a positive mood that transfers to an upbeat interaction with her client during a morning work meeting. This role performance brings intrinsic and extrinsic rewards which then enhance mood. The same process is true of the spillover of negative moods. In addition, positive affect also allows one to accumulate resources and enhance self-esteem and self-control. Edwards and Rothbard (2000) emphasize that mood spillover is largely unintentional and that intent regulates the degree to which felt mood is manifested as expressed mood, and that people regulate expressed moods to fulfill role expectations, enhance role performance, and receive role rewards.

Another type of spillover offered by Edwards and Rothbard (2000) is value spillover which suggests two causal structures. The first being that work and family are socializing forces that affect values regarding life as a whole, and these life values influence values specific to a domain. For example, the values developed in the work domain such as obedience will influence one's general life values. Based on these general values, it is argued that this individual will emphasize obedience in parenting

techniques used in the family domain (Edwards & Rothbard, 2000). Second, values in one domain may directly affect values in the other domain. Similarly, the spillover of work and family skills also implied two causal pathways. First, skills obtained in one domain may influence one's general knowledge which in turn influences family skills. For example, leadership skills obtained at work may enhance one's general knowledge of guidance which may, in turn, facilitate parental supervision skills. The second pathway for the spillover of skills is directly from one domain to the other such as the learning of finance skills for a work task being directly applicable to managing one's family finances. A final type of spillover offered by Edwards and Rothbard (2000) is behavioral spillover which follows a two-part causal structure similar to that of values and skills. Specifically, behaviors developed in one domain may become ingrained as habits or styles that then influence the second domain or behaviors in one domain or they may directly affect opposite domain behaviors.

Drawing on previous theoretical frameworks of positive spillover, Hanson et al. (2006) defined work-family positive spillover as the transfer of positively valenced affect, skills, behaviors, and values from the originating domain to the receiving domain, thus having beneficial effects on the receiving domain. Hanson et al. developed and assessed a multidimensional measure to capture these different facets of spillover based on the following six sub-dimensions, including, a) work-to-family affective positive spillover, b) work-to-family behavior based instrumental spillover, c) work-to-family value-based instrumental positive spillover, d) family-to-work affective positive spillover, e) family-to-work behavior based instrumental spillover, f)

family-to-work value-based instrumental positive spillover. Instrumental spillover was defined as instances in which skills, abilities and values are applied effectively in another role, and affective spillover as instances in which affect or emotion is carried over from one role to another (Hanson et al., 2006).

Another construct that has been used to measure the positive aspects of participating in both work and family roles is work-family facilitation (Grzywacz, 2002; Wayne, Grzywacz, Carlson & Kacmar, 2004). Work-family facilitation is the notion that work and family are interdependent and complementary (Werbel & Walter, 2002). Grzywacz and colleagues define work-family facilitation as the extent to which an individual's engagement in one domain of life (e.g., work or family), is beneficial for the second domain and yields developmental, affective, capital or efficiency gains that result in enhanced functioning in another life domain (e.g., family or work). Whereas positive spillover involves the transfer of personal characteristics such as affect, skills, behaviors, and values from one domain to another, thus benefiting the second domain, facilitation is proposed to occur not just through personal gains but through capital gains as well (e.g., money, employment benefits, and social contacts; Hanson et al., 2006).

Yet another construct that has been used to operationalize this phenomenon was introduced by Greenhaus and Powell (2006) and defined as *enrichment.* Enrichment is said to occur when resources are generated in one role (e.g., family) that improve the quality of life in another role (e.g., work). Greenhaus and Powell define

resources widely to include personal resources, similar to those in the definition of spillover, as well as social capital and material assets, which go beyond traditional definitions of positive spillover. Given this definition, constructs such as work-family positive spillover, and work-family facilitation can at times be broadly categorized under the rubric of work-family enrichment (Hanson et al., 2006). In addition, they propose a theoretical model which will be discussed in the next section as I highlight the most recent theoretical developments in the positive spillover literature. Finally, Carlson, Kacmar, Wayne and Grzywacz (2006) developed a multi-dimensional measure of work-family enrichment that involves resources gains. The measure consists of three dimensions from the work to family direction (development, affect, and capital) and three dimensions from the family to work direction (development, affect, and efficiency). The items in this scale were developed to capture the true essence of the definition of enrichment by incorporating the transfer of resource gains into the other domain in ways that enhance functioning for the individual.

As noted previously, the current study views the concept "positive spillover" as a meta-construct which will be defined loosely to include personal resources as well as the social capital and material resources proposed by Greenhaus and Powell (2006). With the focus of the current dissertation on the antecedents of positive spillover, it is important to review the research that has examined these predictive relationships.

Antecedents of Positive Spillover

As mentioned previously, little research has examined the predictors of work-family positive spillover. As an exception, Kirchmeyer (1992; 1993) examined positive spillover from non-work roles including parenting, community work, and recreation, to the role of the employee. Results showed that the resource of psychological parent involvement was positively related to spillover between parenting and work roles, whereas the demand of actual time spent parenting was negatively related to positive spillover (Kirchmeyer, 1992). In 1993, Kirchmeyer found higher levels of positive spillover reported by individuals who used certain coping strategies such as role redefinition.

Further, Grzywacz and Marks (2000a) offered a more comprehensive examination of the antecedents of positive spillover. Using data from the National Survey of Midlife Development in the United States (MIDUS), with a sample of 1,986 employed adults, the researchers examined the relationships of work and family antecedents to both work-to-family and family-to-work positive spillover. They found the family-related antecedents of support from one's spouse and support from other family members were only related to family-to-work positive spillover. With regards to work-related antecedents, the resource of decision latitude had a positive relationship with both work-to-family and family-to-work positive spillover whereas the demand of pressure at work was negatively related to both directions of spillover. In addition, they found that high levels of extraversion were associated with high levels of both work-to-family and family-to-work facilitation, whereas low levels of neuroticism were related to both types of work-family facilitation. Although the

previous findings have laid the ground work for establishing the antecedents of work-family positive spillover, the authors recognize that the cross-sectional nature of these studies does not allow us to draw causal inferences with regards to the direction of this relationship and suggest that longitudinal research is needed to fully understand the determinants of positive spillover (Grzywacz & Marks). At this point, it was clear that the development of theoretical frameworks would be necessary to better understand the positive spillover process as a whole, including both antecedents and outcomes. The following section will review two of the most recent theoretical frameworks developed to understand the positive spillover construct.

Theoretical Frameworks

In conjunction with the empirical research examining the concept of positive spillover, there has been a recent call for the development of a theoretical framework from which to examine this construct (Frone, 2003). Wayne, Grzywacz, Carlson and Kacmar (2007) offered a theoretical explanation and model of the antecedents and outcomes of positive spillover based on the concepts of positive organizational scholarship (Cameron, Dutton, & Quinn, 2003), ecological systems theory (Bronfenbrenner, 1979), and conservation of resources theory (Hobfoll, 1989). They suggested that personal characteristics (e.g., positive affectivity, self-efficacy, work identity) and environmental resources in the form of energy resources, support resources, and condition resources would enable work-family positive spillover.

In 2006, Greenhaus and Powell introduced a theory of work-family enrichment as a model for examining the construct of positive spillover. They suggested five types

of resources that can be generated in a role including: flexibility, material resources, skills and perspectives, psychological and physical resources and social-capital resources. They proposed that these resources generated in one domain (work or family) will promote high performance and positive affect in the opposite domain. Specifically, this model includes both an instrumental and an affective path between the two domains. The instrumental path occurs when a resource is transferred directly from one role to another, leading to increased performance in the receiving domain. On the other hand, the affective path occurs when a resource generated in one role promotes positive affect in that role, which in turn produces high performance in a second domain and then leads to positive affect in that domain as well. This theoretical model will be used to guide the hypothesized relationships in this study and will be discussed in further detail in the next chapter (See Figure 4).

CHAPTER IV

A Theory of Work-Family Enrichment and Hypothesis Development

A Theory of Work-Family Enrichment

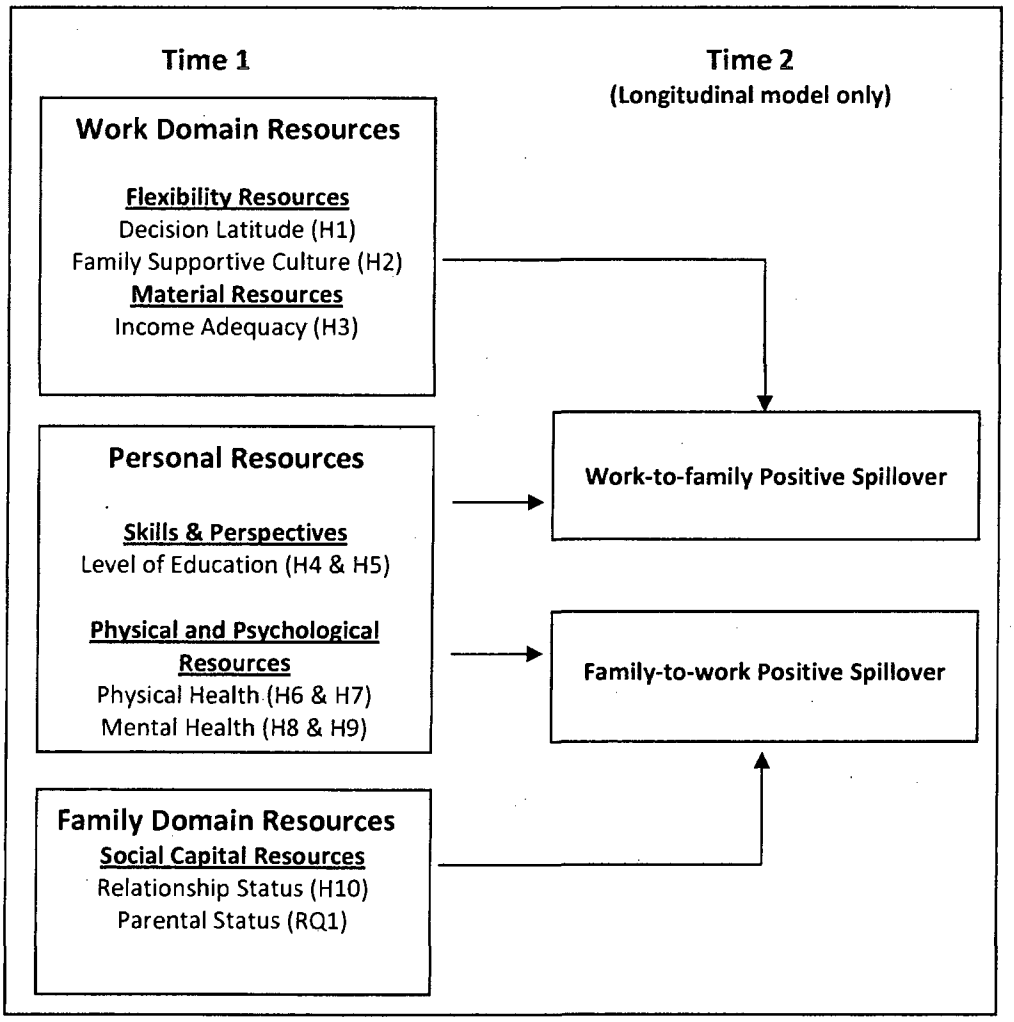
In 2006, Greenhaus and Powell answered a call for the development of a theoretical model of work-family positive spillover with their influential article entitled "When work and family are allies: A theory of work-family enrichment." There are three main components in Greenhaus and Powell's theoretical framework of work-family enrichment: First, they conceptualize work-family enrichment as being bidirectional. That is, work can provide resource gains that enhance performance in the family domain, or family can provide resource gains that improve performance in the work domain. Second, their framework defines a resource as "an asset that may be drawn on when needed to solve a problem or cope with a challenging situation" (p. 80). Along with this definition, Greenhaus and Powell identify five types of resources that can be generated in a role (work or family). They proposed that these resources generated in one domain (work or family) will promote high performance and positive affect in the opposite domain. These resources will be the focus of the current study and include a) flexibility resources, b) material resources, c) skills and perspectives, d) psychological and physical and e) social capital resources.

A third component of their framework rests on the idea that resources promote work-family enrichment primarily through two different paths: instrumental and affective. The instrumental pathway suggests that employees believe their family or

work involvement has increased their ability to perform on the opposite role. For example, family domain support may prepare individuals with resources necessary to handle co-workers or that these resources have increased their ability to perform on the job. The affective path promotes work-family enrichment indirectly through influence on moods and emotions resulting from role participation. Specifically, as individuals gain greater resources through participation in one role (work or family), their positive mood in that role will increase and then aid their performance in the other role (Greenhaus, & Powell, 2006). Finally, they propose the salience of role B (work or family) to moderate both the relationship between role A resources and role B performance as well as the relationship between positive affect in role A and role B performance. Greenhaus and Powell's theoretical model is included in the previous chapter as it will be used as a guide to exploring the antecedents of work-family positive spillover in the current study (See Figure 4).

Due to the fact that the current study is focused on the antecedents of positive spillover, I have chosen to focus on the first two components of their model, by operationalizing each of the five types of resources in order to examine their relationship with the positive spillover construct (See Figure 1 inserted below). As noted by Greenhaus and Powell (2006), many of the resources generated by role experiences are interdependent such that the acquisition of one resource can trigger the acquisition of another. Thus, the constructs used to operationalize one resource may be easily applied to another resource.

Figure 1. Work and family resources modeled as predictors of the level of work-to-family and family-to-work positive spillover over time.



To the author's knowledge, only a few studies have tested the resources proposed in Greenhaus and Powell's theoretical model. Hill et al. (2007) conducted a qualitative exploration using data from the IBM 2004 Global Work and Life Issues survey in order to understand the positive influences of employee's work life on their

home life and vice versa. They found that the facilitative aspects of work and home that individuals reported were largely consistent with the resources proposed by Greenhaus and Powell. For example, the most common aspects of work that were positively influenced by home life included psychological aspects, flexibility, relationships, and skills and resources. Furthermore, the most common aspect of home influencing work were physical and psychological benefits, relationships with family members, flexibility, and home based skills. They note that these findings should encourage future quantitative research to examine these resources as well as the proposed moderators and pathways.

Wayne, Randel, and Stevens (2006) used Greenhaus and Powell's (2006) theoretical framework to examine both formal family friendly policy use and informal family supportive culture as predictors of work-family enrichment. Similar to the previous work-family research, they found that informal workplace practices, particularly having a family supportive culture, were more important to the work-family experience than formal organizational practices. They suggest that informal practices may be more relevant to enrichment than formal approaches because they provide a more flexible, personalized response to individual work-family needs. As a result, employees more readily experience positive affect to transfer to the family domain. These findings are consistent with relationship between formal and informal supports and work-family conflict such that informal support increases employee utilization and the effectiveness of formal family friendly policies.

Similarly, Stoddard and Madsen (2007) acknowledged Greenhaus and Powell's (2006) framework in their examination of the relationship between enrichment and well-being. However, they do not articulate physical and mental health as a resource as proposed by Greenhaus and Powell nor do they specify the predicted direction of the relationship. Rather, they used Greenhaus and Powell's framework to examine the role of affect in the spillover relationship.

Appendix A provides a summary of the studies that articulate the development of the positive spillover construct as well as those that have examined the relationship between positive spillover and each of Greenhaus and Powell's (2006) five types of resources. It is important to note that the majority of these studies are cross-sectional and have not established a predictive relationship between resources and spillover.

Due to the novelty of Greenhaus and Powell's (2006) theoretical frame work, the current study is the first to hypothesize and test the resources predicting positive spillover. The following sections will discuss each of these resources as defined by Greenhaus and Powell in addition to a discussion of the constructs that were used for their operationalization in the current study and their hypothesized relationship with positive spillover. I will begin with a discussion of resources in the work domain that facilitate family performance followed by those resources in the family domain that facilitate work performance.

Work Domain Resources

The following sections will discuss resources that originate in the work domain and facilitate cross-domain performance. First, I will discuss the idea of flexibility

resources as operationalized by decision latitude and family-supportive culture followed by a review of material resources as operationalized by income adequacy.

Flexibility Resources

Greenhaus and Powell (2006) define flexibility resources as one's discretion to determine the timing, pace, and location at which role requirements are met. The current study will test the idea of flexibility resources with two different constructs that originate in the work domain and are expected to facilitate home life. Specifically, flexibility resources will be operationalized using the construct of decision latitude which is described by Karasek (1979) as a characteristic of the job that enables workers to decide how they will complete work tasks and family-supportive culture which is defined by Allen (2001) as a type of informal support that gives weight to the effectiveness of formal workplace policies (i.e., flextime, telecommuting, etc.). I will begin with a discussion of decision latitude followed by family-supportive culture as flexibility resources.

Decision latitude and work-family positive spillover. Decision latitude was defined by Karasek and Theorell (1990) to include two components: authority over decisions and skill discretion. Authority over decisions refers to the democracy aspect of the work organization and includes a good understanding of what should be done and how it should be done. This could also be labeled good task control. The second component, intellectual or skill discretion refers to the possibility for the employees to decide how their knowledge is used and developed. This could also be labeled good

knowledge control. If the employees have high intellectual discretion they have a relatively good possibility to exert control in unexpected situations that may arise. Overall, decision latitude can be described as the amount of control (task and knowledge) that an individual is granted to conduct his or her job. Thus, it is argued that this construct acts as a resource by allotting employees a certain amount of flexibility in how their job tasks are chosen to be carried out and that this flexibility resource in the work domain will facilitate positive outcomes in the family domain. Thus, I will turn to a review of the literature examining the construct of decision latitude in relation to positive spillover.

Little empirical research has examined this relationship between decision latitude and positive spillover. As an exception, Grzywacz and Marks (2000a) found empirical support for the relationship between decision latitude and work-family positive spillover. Specifically, they used ecological systems theory to understand how contextual factors in both the work and family microsystems are found to be independently associated with work-family spillover (conflict and positive spillover). They hypothesized that a lower level of positive spillover between work and family would be associated with fewer ecological resources within each domain with lower levels of work resources correlating to lower work-to-family positive spillover and lower levels of family resources correlating to lower family-to-work positive spillover. Specifically, they hypothesized work resources as measured by decision latitude and support from coworkers and supervisors would have a direct and positive relationship with work family positive spillover such that lower levels of decision latitude would

lead to lower levels of positive spillover. Along the same lines, they hypothesized that lower levels of spouse and other family support would be associated with lower levels of positive spillover.

They found that resources within the workplace were the most positive correlates of positive spillover from work to family (Grzywacz & Marks, 2000a). Specifically, lower levels of decision latitude were associated with less positive spillover from work to family. For example, a grocery stocker who is given the authority to decide the pace and the method in which he or she stocks will feel more relaxed than the employee who is given a strict stocking schedule. These low levels of decision latitude experienced by the employee with the strict schedule will be associated with less positive spillover from the work to the family domain. On the contrary, high levels of decision latitude will be associated with more work-to-family positive spillover. A lower level of support at work from coworkers and supervisors was also strongly associated with less positive spillover from work to family. Similarly, lower levels of family support were related to lower levels of family-to-work positive spillover.

The importance of examining decision latitude at work is emphasized by its association with employee health outcomes. Specifically, it has been shown that individuals who lose a certain amount of decision latitude at work have a significantly greater risk of developing coronary heart disease (Theorell, 2003). In a case control study of first myocardial infarctions, all men and women between the ages of 45 and

65 who had suffered a first myocardial infarction were invited to participate, in addition to a matched group of men and women without coronary heart disease. Participants were examined every year for a 10 year period and it was found that men who experienced a loss of decision latitude over time were twice as likely to be at risk for myocardial infarction (Theorell, 2000). In addition, research has shown that a loss of decision latitude may have importance for the risk of developing acute neck-shoulder pain as illustrated in a case control study of low back pain and neck-shoulder pain (Fredriksson, 2000). Specifically, it was found that those who reported that they had experienced decreased decision latitude had an increased likelihood of belonging to the neck-shoulder pain group. Finally, the relationship between decision latitude and job strain has been illustrated through the Karasek's (1979) demand-control model. Specifically, the combination of low levels of decision latitude and a high level of psychological demands is related to increased risk of illness and cardiovascular disease (Belkic, Schnall, & Ugljesic, 2000). Thus, the importance of decision latitude as a job resource to employees is highlighted by the consistent association with important health outcomes.

Grzywacz and Marks (2000a) acknowledge the fact that their findings related to decision latitude were established using cross-sectional data and point to the importance of conducting longitudinal research to gain a better understanding of the determinants of positive spillover. Thus, the current study will use a longitudinal research design to establish decision latitude as an antecedent of positive spillover. Taking the empirical findings of Grzywacz and Marks (2000a) as well as the

theoretical framework discussed above, decision latitude can be established as a resource that originates in the work domain at time one and is expected to create positive experiences in the family domain at time two. Thus, I hypothesize a relationship with *work-to-family* positive spillover. Specifically,

> *Hypothesis 1*: Decision latitude will be significantly and positively related to work-to-family positive spillover across time such that decision latitude at time one will have a positive relationship with work-to-family positive spillover at time two.

To continue with the idea of work domain resources, I will now turn to another type of flexibility resource that is different from decision latitude as it is a characteristic of the organization rather than the job itself. Specifically, family-supportive culture is a type of informal support that is characteristic of an organization that is supportive of employee's work and family demands.

Family-supportive culture and work-to-family positive spillover. The concept of family-supportive culture stems from the overarching idea of workplace supports for work and family. Workplace supports have been defined broadly to include both formal and informal means of support within the organization (Hammer & Neal, 2007). Formal supports are comprised of *policies* such as flexible work arrangements; *services*, such as programs that provide resource and referral information about dependent-care options; and *benefits*, such as childcare subsidies (Neal, Chapman, Ingersoll-Dayton, & Emlen, 1993). Employees today are offered a range of work-

family policies, benefits, and programs, such as job sharing, telecommuting, job-protected parental leave, part-time return-to-work options, flextime, onsite child care, and support groups for working parents (Lobel & Kossek, 1996).

Although employers have become more interested in work and family, research has shown that formal work-family policies have not been highly effective in reducing work-family conflict and improving worker health and well-being (Hammer, Neal, Newsom, Brockwood, & Colton, 2005). It has been shown that even when these family supportive policies are available, they are underutilized, have low baseline utilization rates, and use can be associated with higher, rather than lower, work and family conflict, specifically family-to-work conflict (Hammer et al., 2005). In addition, research concerning these types of formal organizational policies has been mixed with regards to reducing levels of work-family conflict (Hammer et al., 2005; Kossek & Ozeki, 1998). Research has shown the effectiveness of these policies to be contingent upon the family supportive culture of the workplace (Allen, 2001). Specifically, a family supportive culture is said to create an environment in which employees feel comfortable and supported in taking advantage of these formal policies (Allen). It is important to keep this in mind as we turn towards a discussion of the informal workplace supports.

Informal supports refer to the degree to which an organization is perceived by employees to have a family-friendly, or positive, family-supportive culture (Neal & Hammer, 2007). Family-supportive culture can be defined 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 (Thompson et al., 1999). Employees' perceptions about the family-supportive culture in their organization are expected to influence their attitudes about the organization as well as decisions about whether or not to use work-family benefits (Thompson et al., 1999). A family supportive culture has also been shown to give weight to the effectiveness of more formal workplace supports (Allen, 2001). Enhancing an organization's family-supportive culture may create an atmosphere that is more conducive to employees making use of workplace supports, which may ultimately have beneficial effects on employee health and well-being (Neal & Hammer, 2007).

As emphasized above, the majority of research has examined the relationship between family-supportive culture and work-family conflict. However, a few empirical studies have examined this construct as a resource related to positive spillover. Thompson and Prottas (2006) examined supervisor support, coworker support and supportive culture as antecedents to positive spillover. Although they did not find culture to predict positive spillover, they did find that supervisor and coworker support were significantly related to positive spillover. This finding emphasizes that supervisors and co-workers, who are key in establishing a family supportive culture, act as resources in the work-domain to influence positive outcomes in the family domain.

Wayne, Randel, and Stevens (2006) used Greenhaus and Powell's (2006) theoretical framework to examine both formal family friendly policy use and informal family supportive culture as predictors of work-family enrichment. Similar to the previous work-family research, they found that informal workplace practices, particularly having a family supportive culture, were more important to the work-family experience than formal organizational practices. They suggest that informal practices may be more relevant to enrichment than formal approaches because they provide a more flexible, personalized response to individual work-family needs. As a result, employees more readily experience positive affect to transfer to the family domain.

Although research exploring the relationship between family-supportive culture and positive spillover is limited, family-supportive culture as an organization based resource has been examined in the work-family literature. Specifically, Mauno, Kinnunen and Ruokolainen (2006) examined family-supportive culture as an organization-based resource using the Job-Demand Resource model and found that a supportive culture buffered against the negative effects of work-to-family conflict on general well-being and job attitudes. Similarly, Voydanoff (2005) defined family-supportive culture as a type of boundary-spanning resource that enhances employee flexibility in coordinating work and family responsibilities by legitimizing employee efforts to meet family needs and by creating a perception that career penalties are not associated with using available policies.

With the idea that family-supportive culture is an organization-based resource which has been shown to buffer against the negative effects of work-family conflict and enhance employee flexibility, the current study will expect family-supportive culture to act as a resource that originates in the work-domain at time one and leads to positive outcomes in the family domain over time. Specifically,

> *Hypothesis 2*: Family-supportive culture will be significantly and positively related to work-to-family positive spillover across time such that family-supportive culture at time one will be positively related to work-to-family positive spillover at time two.

A final work-domain resource to be discussed is included in what Greenhaus and Powell (2006) refer to as material resources. Material resources are different from flexibility resources as they can be thought of using the more concrete aspects of one's life.

Material Resources

Greenhaus and Powell (2006) define material resources to include money and gifts obtained from work and family roles. Due to the fact that a certain level of income can vary from person to person in terms of how adequately it fulfills one's family needs, in the current study, I will operationalize material resources using a self-report measure of income adequacy. Income adequacy can be defined as one's perceived ability to get along on his/her income.

Income and positive spillover. The relationship between work-life balance and income can be understood through the concept of the worker-earner role. According to Voydanoff (2007), the worker-earner role links the work role in the economy with the earner role in the family. At the individual level, employment and income are the major components of the worker-earner role. That is, family members generally provide economic resources to their families by earning income through employment. Further, an individual participates in the economy as a worker producing goods and services and as an earner by providing income to meet family needs. Thus, a worker's income can be viewed as a resource that originates in the work domain and creates the positive experience of supporting one's family in the opposite domain.

The current study will operationalize material resources using a measure of income adequacy. Income adequacy gives more of a context to income as a resource than would a straight measure of household income. For example, one family may live comfortably from a certain income and another family may be struggling to make ends meet from that same income. Research has examined the inability to meet one's current financial needs with the construct of economic deprivation. A discussion of economic deprivation and the effects it has on workers and their families will provide a background for the idea of income as a resource.

Outcomes of inadequate income. In order to fully understand the importance of income as a resource, it is essential to acknowledge the outcomes associated with inadequate levels of income. For example, economic deprivation incorporates the

inability to meet current financial needs and the loss of financial resources and income over a period of time (Voydanoff, 2007). The inability to meet financial needs derives from the combination of income level and needs associated with family structure and size. On the other hand, income loss occurs because of employment instability. Trends in economic deprivation have shown it to be associated with increased poverty rates, loss of income due to employment instability and recession-related unemployment (Voydanoff, 2007). In addition, economic deprivation has been shown to be a stressor that is negatively associated with family role performance and quality and individual well being (Voydanoff, 2007).

Research has shown the economic deprivation is associated with several aspects of family life, including family formation and stability, the division of household labor, and quality of family life. Family income has a positive relationship with indicators of marital quality such as marital satisfaction, frequency of interaction, and a negative relationship with divorce proneness.

Further, the perception of inadequate levels or income (or financial strain) has been shown to exhibit a negative relationship with life satisfaction. Specifically, COR Theory suggests that affective strain drains emotional resources leaving individuals with fewer resources to cope with daily stressors and to allocate toward performance in various roles (Hobfoll & Shirom, 1993; Wright & Cropanzano, 1998). Drained emotional resources may inhibit an individual's ability or desire to engage in

enjoyable activities, interact with others, and seek social support, all of which are positively associated with life satisfaction (Diener et al., 1998; Warr, 1999).

In addition, financial strain could affect life satisfaction through negative affective states. Psychological experiences of financial strain, defined as a negatively-oriented affective state of arousal, are likely to accumulate and lead to other negative moods or emotions. Research shows that positive and negative affective states, and more severe mood disorders, such as anxiety and depression, are related to life satisfaction (Emmons & Diener, 1985; Lehman, 1988; Palmer et al., 2002).

Finally, financial strain could negatively influence life satisfaction through physical health or family problems. As the bottom-up perspective of life satisfaction suggests, the evaluations and feelings about a person's life are constructed from satisfaction with specific life domains, such as work, school, family, or health (cf. Brief et al., 1993). Research has established that financial strain leads to poor physical health and marital dissatisfaction (Conger et al., 1999; Olivius et al., 2004). Thus, financial strain reduces a person's satisfaction as it relates to health and family. Research and theory suggest that these health and marital quality ratings are related to a person's overall life satisfaction (Brief et al., 1993; Glen, 1990). The previous review emphasizes the importance of income as a resource and provides support for the idea that inadequate levels of this resource may be related to negative outcomes such as life and marital dissatisfaction and poor physical health. Now, I will shift views and discuss income as a facilitating resource.

Income as a facilitating resource. Although most research has focused on inadequate income as a demanding aspect of work role leading to conflict within the family role (e.g., Voydanoff, 2007; White & Rogers, 2000), the current study is more interested in income as a resource. Specifically, I expect that higher levels of income adequacy (defined as a work role resource) will be positively related to higher levels of positive spillover from work-to-family.

Barnett and Hyde (2001) hypothesized added income of dual earner couples as a process that contributes to the beneficial effects of participating in multiple roles. The added income generated by dual-earner couples benefits them and their children and reduces the distress experienced by sole-bread winner husbands. They hypothesized that added income mediates the effect of multiple roles on well-being. Further, they show how women's employment can serve as an antidote to the effects of economic hardship by decreasing the poverty rates of married couples (Blank, 1988). Barnett and Hyde concluded that in some families, wives' employment has a positive effect on marital quality through increased family income, specifically in those families in which the husband's income is low and the wife's income becomes significant in reducing financial strain. Similarly, Ross and Huber (1985) found that the higher the wives' earnings, the higher the family income, which decreased the couple's perception of economic hardship and subsequently decreased levels of depression.

Further, in a qualitative study conducted by Hill et al. (2007), participants identified material well-being (operationalized by salary, benefits, and compensation) as a key aspect of work that benefits home life. Specifically, work benefited home life by enabling families to meet household expenses and have financial stability. These findings add to the argument that income adequacy will act as a work domain resource at time one in predicting the level of positive spillover from work to family over time. Specifically,

> *Hypothesis 3*: Income adequacy will be significantly and positively related to work-to-family positive spillover across time such that income adequacy at time one will be positively related work-to-family positive spillover at time two.

In addition to the work domain resources that I have discussed thus far, it is also important to recognize that certain resources can originate in both the work and family domains. In the current study, these non-domain specific resources are referred to as personal resources which are expected to influence both work-to-family and family-to-work positive spillover. Thus, I will begin with a discussion of Greenhaus and Powell's skill and perspective based resources operationalized by level of education, followed by a review of physical and psychological health as operationalized by self-reported physical and mental health.

Personal Resources

Skills and Perspectives

The first of the personal resources has two components: skills and perspectives. The component of skills is defined as a broad set of task-related cognitive and interpersonal skills, coping skills, multitasking skills and knowledge and wisdom derived from role experience. Perspectives involve ways of perceiving or handling situations such as respecting individual differences, valuing differences in cultural background and being understanding of other people's problems.

In the current study, I have chosen to operationalize skills and perspectives using the construct of education level. To the author's knowledge, no research studies have specifically examined the relationship between education level and positive spillover. Thus, I will provide a review of the literature connecting education level and work-family conflict and describe how the relationship between education and work-family conflict differs from that of positive spillover. I will begin with a review of the relationship between level of education and work-family conflict, followed by a discussion of education level as a resource and then develop the rationale for education as a predictor of work-to-family and family-to-work positive spillover.

Education level and work-family conflict. The relationship between level of education and work-family conflict is most often seen in the literature as a positive association. Specifically, higher levels of education are related to higher levels of work-family conflict. For this reason, level of education is often controlled for in many work-family studies. For example, Wayne, Musisca, and Fleeson (2004) controlled for education in their study examining the relationships of the big five

personality traits (extraversion, conscientiousness, agreeableness, openness to experience, and neuroticism) to work-family conflict and facilitation. Their regression results show education level as a significant and positive predictor of both work-to-family and family-to-work conflict. Specifically, those with a 4 year college degree or post graduate degree reported higher levels of conflict.

The relationship between work-family conflict and level of education is complex as it has been shown to differ by gender as well as by the direction of conflict (work-to-family or family-to-work). For example, Kinnunen and Mauno (1998) examined the antecedents and outcomes of work-family conflict among employed women and men in Finland. They report a positive relationship between work-to-family and family-to-work conflict and education for men. However, this relationship did not exist for female participants in this study. Additionally, Noor (2003) examined the relationships between work and family-related variables, work-family conflict and women's well being and found that education was significantly and positively predictive of family-to-work conflict in women but had no significant relationship with work-to-family conflict.

Recently, in research examining social class and the experience of work-family conflict during the transition to adulthood, Ammons and Kelly (2008) found that education level was differentially associated with work-to-family and family-to-work conflict. Specifically, early family formation, coupled with poor working conditions, led those with *lower educational attainments* to experience more *family-to-work*

conflict as measured by years of interference. Years of interference were calculated using a measure of work-family interference across 5 points in time. In contrast, young adults with *more education* experienced more *work-to-family conflict*, and this was especially true for college-educated women. They reported that college graduates were much more concerned about how work and family will intersect in their future. They attribute this to the idea that young adults with college degrees had a longer period of pre-family anticipation of conflict, while other younger adults were already living through the time when conflicts were most likely to occur.

As illustrated in this review, the relationship between work-family conflict and level of education can vary depending on the direction of the conflict as well as one's gender. Overall, the findings are not very consistent with regards to the differing relationship between work-to-family and family-to-work conflict with education level. Although the relationships have not been overwhelmingly consistent, we do know that it is an important variable to take into account when examining this relationship between work and family. With this idea in mind, I argue that it is not only important to understand the relationship between education and work-family conflict but also to investigate the impact of education on work-family positive spillover and specifically to understand education as a personal resource that facilitates work and family domain performance. The next section will develop a rationale for education as a resource providing skill and perspective (as defined by Greenhaus and Powell, 2006) and present the hypothesized relationship with work-to-family and family-to-work positive spillover.

Education as a resource. Level of education will be viewed as a personal resource that has facilitating effects on the work and family domains. Level of education can be viewed as a skill-based resource which is defined by Greenhaus and Powell (2006) as a broad set of task-related cognitive and interpersonal skills, coping skills, multitasking skills and knowledge, and wisdom derived from role experience. Further, education can also act as a resource that offers perspective to the work and family domains. Greenhaus and Powell define perspective to include ways of perceiving or handling situations such as respecting individual differences, valuing differences in cultural background and being understanding of other people's problems.

The education that one has chosen to pursue in his/her personal time acts as a resource and provides the knowledge, skills and perspectives that are necessary for improved cross-domain performance. Specific to family-to-work positive spillover, the skills obtained through one's education are expected to facilitate performance in the job domain. Whether this is in the form of successfully carrying out one's job tasks or advancing to a higher level position, education is clearly a benefit or a resource to the working role. In addition, the perspective that one gains from the educational experience is expected to provide individuals with an enhanced understanding of the value of individual differences and how they play a role in the workplace. In the same way, it is expected that education will act as a resource that facilitates outcomes in the family domain. Specifically, education may provide skills and perspectives that facilitate decisions made with regards to raising a family or

running a household. For example, the perspectives gained from the experience of education may influence a parent to teach his or her family the value of culture and the importance of individual differences in our society. Similarly, there are various skills learned through education such as multi-tasking and coping skills as well as the wisdom derived from role experiences that are expected to facilitate performance in the non-work domain.

As noted previously, the research linking work-family conflict and education forms a good case for the importance of education in studies of work and family. It is important to note that work-family conflict and work-family positive spillover are completely separate constructs in the work-family literature and should not be viewed as opposites on a continuum. Thus, the relationship that exists between positive spillover and level of education manifests itself somewhat differently than that of work-family conflict and level of education. However, the research examining the relationship between education and work-family conflict can help to guide the hypothesized relationship with positive spillover. I argue that education is a personal resource that provides skills and perspectives and will positively influence the work and family domains. With this in mind, I predict that higher levels of education will be related to higher levels of both work-to-family and family-to-work positive spillover. Thus,

Hypothesis 4: Education will be significantly and positively related to work-to-family positive spillover across time such that education level at time one will have a positive relationship with work-to-family positive spillover at time two.

Hypothesis 5: Education will be significantly and positively related to family-to-work positive spillover across time such that education level at time one with have a positive relationship with family-to-work positive spillover at time two.

Similar to education, the next set of physical and psychological resources are personal resources that are not domain-specific and are expected to create facilitating effects in both the work and family domains. The next section will review these resources as operationalized by self-reports of physical and psychological health.

Psychological and Physical Resources

Greenhaus and Powell (2006) defined psychological and physical resources to include positive self-evaluations, personal hardiness, positive emotions about the future, and physical health. I have chosen to operationalize psychological and physical resources using self-reported perceptions of physical and mental health.

Several studies have found relationships between positive spillover (work-to-family and family-to-work) and individual health (mental and physical). For example, Grzywacz (2000) found that positive spillover was related to lower levels of problem drinking and was associated with better self-reported mental health. Barnett and Hyde

(2001) found engaging in multiple roles to benefit both mental and physical health. Similarly, Grzywacz and Bass (2003) found that work-family facilitation was associated with lower risk of mental illness, depression, and problem drinking. Specifically, each unit increase in family-to-work facilitation was associated with a 15% decrease of reported depression and a 38% decrease in reported problem drinking. In addition, Hanson et al. (2006) found that the more resources available to individuals at home, the higher their level of mental health. In a recent study of sleep quality, Williams, Franche, Ibrahim, Mustard, and Layton (2006) found that family-to-work positive spillover was associated with better sleep quality after controlling for a number of health-related factors. Stoddard (2007) found a relationship between enrichment and health such that overall health and mental-emotional health were strongly correlated with enrichment in the family-to-work direction, suggesting that family participation supports the mental-emotional and overall health of an individual.

Finally, Hill et al., (2007) conducted a qualitative study with data from the IBM 2004 Global Work and Life Issues Survey. Respondents reported that physical and psychological health resulting from work benefits were features that positively influenced home life. For example, one mother reported that a benefit of working at home was her ability to get more sleep in the morning. This work benefit improves her physical health and allows her to feel less stressed and less tired when performing work and family domain tasks. Respondents in this study also identified physical and psychological resources as aspects of home that positively influence work life. Specifically, a young father spoke of home as, "...a place of physical renewal where

he released work pressure by exercising every week and eating healthy." Further, a middle aged women spoke about home as "a place of psychological renewal...a good home life provides emotional support to help relieve and regulate the work pressure." This qualitative study lends further support to the idea that physical and psychological health act as resources in both the work and home domains.

These empirical findings provide evidence that a relationship exists between positive spillover and physical and mental health. However, each of these studies used a cross-sectional methodology and as a result, we cannot draw inferences with regards to the direction of this relationship. Unlike the majority of these studies, I am interested in physical and mental health as predictors of positive spillover rather than outcomes. Due to the fact that the previous studies cannot establish causality, I test this relationship longitudinally and argue that physical and mental health are physical and psychological resources that will affect the level of positive spillover over time.

Further, due to the fact that physical and mental health resources are not domain specific and can be derived from both involvement in the work and family domains, I hypothesize mental and physical health as determinants of both work-to-family and family-to-work positive spillover. Specifically,

> *Hypothesis 6:* Physical health will influence work-to-family positive spillover across time such that higher reports of physical health at time one will lead to higher reports of work-to-family positive spillover at time two.

Hypothesis 7: Physical health will influence family-to-work positive spillover across time such that higher reports of physical health at time one will lead to higher reports of family-to-work positive spillover at time two.

Hypothesis 8: Mental health will influence work-to-family positive spillover across time such that higher reports of mental health at time one will lead to higher reports of work-to-family positive spillover at time two.

Hypothesis 9: Mental health will be significantly and positively related to family-to-work positive spillover across time such that higher reports of mental health at time one will lead to higher reports of family-to-work positive spillover at time two.

The idea that physical and mental health may act as predictors of positive spillover is one that is different from the usual view of these constructs, which is as outcomes. Conversely, there are work and family outcomes that may be influenced by the positive effects of mental and physical health including marital and life satisfaction in the family domain and job satisfaction, productivity, and other improved outcomes in the work domain. Thus, in a more all-encompassing model, these types of outcomes may exist on the outcome side of work-to-family and family-to-work positive spillover. Although it is not in the realm of the current dissertation, it is important to highlight these types of outcomes to gain an understanding of the big picture of the importance of positive spillover between work and family domains.

Family-Domain Resources

Social Capital Resources

In addition to understanding the impacts of work-domain and personal resources, it is also important to understand the function of family-domain resources and specifically that of social support obtained within the family domain. Greenhaus and Powell (2006) use the phrase social capital resources to capture this idea of social support that one receives in the non-work domain. Specifically, Greenhaus and Powell define social capital resources as influence and information as derived from interpersonal relationships in work and family roles that may assist individuals in achieving their goals. The current study will view relationship status and parental status as social capital resources in the family domain that may assist individuals in achieving their work goals.

Relationship & parental status and family-to-work positive spillover. In general, research has shown that family life may positively affect work life by offering social support. Kinnunen, Feldt, Geurts, and Pulkkinen (2006) posit that having a supportive partner and the opportunity to talk through difficulties at work may help individuals to recover from stressful days and that spouse support is an important buffer for job-related stress. Barnett (1994) found that the relationship between work experiences and psychological distress was moderated by experiences in the family for both men and women and that when relationships between wives and husbands were good, a poor job had little effect on one's psychological distress.

It has also shown that family support from a spouse or partner is negatively related to family-to-work conflict such that family-related support may decrease levels of family-to-work conflict. For example, Frone et al., (1997) found that family related support may reduce family-to-work conflict by reducing family distress and parental overload. Grzywacz and Marks (2000) explored the relationship between family factors and negative and positive spillover from family to work. They found that for men a low level of affectual support from their spouse was associated with more negative spillover from work-to-family. Specific to positive spillover, they found a positive relationship between affectual support from family such that that less affectual support from both spouse and other family members was associated with less positive spillover from family to work. Further, Aryee, Srivivas and Tan (2005) found that family support was significantly related to family-work facilitation. They suggested that supportive family experiences may allow individuals to work longer hours and gain development opportunities.

In their qualitative study of work-family facilitation, Hill et al. (2007) found that individuals reported relationships with family members and interaction with family members as two out of the top eight aspects of their home life that positively influenced their work life. For example, a mother spoke about how her relationship with her spouse helped her succeed at work. "My partner allows me the flexibility to work at home after hours and supports me in my job as he knows I love doing what I do." Some responses focused on how spending time together by participating in a variety of family activities and being able to meet one's commitments to them were

aspects of home that facilitated work. Specifically, a woman reported that "spending more time with the family can balance out the stress on number chasing." Finally, other responses emphasized how the presence of children in the home can act as a resource. As one father noted, "I may come home after a hard day at work feeling like I have been chewed up and spit out. But then at the door I am greeted like a conquering hero by my children. I am restored. I have clarity of vision. My energy returns. By the next morning I am full of energy ready for work again." These empirical findings show that the support one receives from family (children and partner) can be related to lower levels of family-to-work conflict (Frone et al., 1997) and higher levels of family-to-work positive spillover (Ayree et al., 2005; Hill et al.).

Additionally, this research has recognized the inability to draw causal inferences due to the cross sectional nature of their data (e.g., Ayree et al., 2005; Gryzwacz & Marks, 2000). With this in mind, the current study will examine the relationship between both parental status and relationship status and *family-to-work* positive spillover with the expectation that those individuals who are in a relationship and/or have children experience a certain level of family support not experienced by those without these family relationships. This family support is expected to have an effect on the level of work-to-family positive spillover reported at time two. Specifically,

Hypothesis 10: Relationship status will be significantly and positively related to family-to-work positive spillover across time such that relationship status at

time one will have a positive relationship with family-to-work positive spillover at time two.

Due to difficulty in hypothesizing a predictive relationship between the presence of children and family-to-work positive spillover, a research question will be posed to understand more about this relationship. Specifically,

Research Question 1: What is the relationship between presence of children at time one and family-to-work positive spillover at time two?

Summary

The previous review of the research has taken the theoretical model proposed by Greenhaus and Powell (2006) and operationalized each type of resource in order to gain an understanding of the various antecedents of both work-to-family and family-to-work positive spillover. In this dissertation, I intend to expand the literature by learning more about the direction of these relationships using a longitudinal research design. Previous research has demonstrated relationships between the proposed constructs and spillover but has most often been cross-sectional in nature (e.g., Gryzwacz & Marks, 2000; Frone et al., 1997). The positive spillover literature is continuing to expand with the development of various theoretical models and it is hopeful that the current study will further this expansion with a test of Greenhaus and Powell's five proposed types of resources.

CHAPTER V

Method

Participants and Procedure

This dissertation made use of an archival data set collected by Dr. Leslie Hammer and Dr. Ellen Kossek, with my assistance. The original research project was conducted as part of the Work, Family, and Health Network, which is funded by a cooperative agreement through the National Institutes of Health and the Centers for Disease Control and Prevention. I served as a research assistant for the entirety of this 3-year study during which I played a key role in the collection of measures, development of the survey instruments, two rounds of data collection, and data cleaning and analysis. I traveled to the Midwest on two separate occasions and conducted orally administered surveys with the participants that were used in the current study. I took a lead role in data cleaning, management and analysis during which I became very knowledgeable about the datasets. I have been very involved in each stage of this research project which has been integral in the development of this dissertation.

Setting

Participants were recruited from one major Midwestern grocery chain with three store "banners" all existing under the same corporate structure. Three stores within each banner were chosen at random by the corporate offices to be included in

this study. The first wave of data was collected in September-October of 2006, and the second wave was collected in June-July of 2007. Further, these data were collected as a part of an overarching intervention study in which 6 stores received a training intervention in March of 2007, and 6 stores did not receive this training (control stores).

Participants

Due to the longitudinal nature of the current study, I used data collected from the associate and supervisor employees of the control stores that did not receive the training intervention in order to avoid any training effects that may affect the relationship between wave 1 and wave 2 data. Store managers and assistant store managers were excluded from analyses in order to avoid differences due to job level or nesting effects. Thus, employees and lower level supervisors from 2 control stores within each banner totaling 6 stores were included in the analyses. The majority of employees work as cashiers in the front end of the store with the remainder of associates and supervisors working in various departments including produce, dairy/frozen, bakery/deli, stockroom, etc. Most associate-level grocery store jobs are characterized by a low level of autonomy and often consist of repetitive activities (i.e., scanning, bagging, stocking) resulting in a low level of task variety. On the other hand, supervisory or more administrative positions may be granted a higher level of autonomy and more variety in the types of tasks conducted on the job.

Each of the 6 stores employed anywhere from 1-9 supervisors/department heads, and the number of employees per store ranged from 30-90. The sample includes 171 associates and 27 supervisors for a total sample size of 198. Participants were 70% female and 59% were married or living as married with an average of 2 children living at home. With regards to race, 67% of participants were Caucasian, 5%, Hispanic or Latina, 3% African American, and the remaining 25% a mix of American Indian, Asian, Native Hawaiian or other. At wave 2, average age was 37 years old. On average, participants had been employed by the grocery chain for 7 years (at wave 2) with 87% of these occupying a non-supervisory position (see Table 7). Response rates for the overarching study were 58% (360/619) for associates and 83% (76/92) for supervisors at wave one. At wave two, response rates were 66% (239/360) for associates and 83% (76/92) for supervisors. The lower number of associates available at wave two is a result of the fact that associate wave two surveys were only administered to those who had participated in wave one.

Procedure

Wave I and Wave II surveys were administered individually in face-to-face interviews. Each interview consisted of 196 survey questions and lasted between 35-50 minutes on average. This process led to virtually no missing data. Surveys were typically administered in managers' offices or in break rooms of the stores to give each participant as much privacy as possible. Informed consent was orally read to participants and 2 copies of the consent form were signed by the participant and the

researcher. Participants were given the opportunity to stop the survey at any point or skip questions they did not feel comfortable answering. In addition, participants were ensured anonymity and no names were recorded on the survey. One copy of the consent was returned to the employee and one copy was stored per human subject's guidelines. All participation took place during paid company time, and each participant received a $25 gift card from the researchers for each survey (Wave 1 and Wave 2) in which they participated. The original surveys are stored in a locked file cabinet in accordance with human subject's guidelines and the archival datasets are stored in a secure computer file.

The following measures were administered at both waves of data collection. Due to the longitudinal nature of the current study, time 2 values of dependent variables work-to-family and family-to-work positive spillover were used. For the remaining constructs, time 1 values were included in the model. Reliabilities are reported accordingly. See Appendix B for a full list of measures and items.

Measures

Positive spillover. Positive Spillover was measured using the affective dimension of a three dimensional positive spillover scale developed by Hanson, Hammer, and Colton (2006). The overall measure consists of an affective dimension and two instrumental dimensions (behavior-based and value-based). The overarching study chose to focus on the affective dimension as it has been utilized most often in the literature. The affective measure of positive spillover consists of eight questions to

which respondents are to indicate agreement/disagreement on a 5-point scale ranging from 1 (*Strongly Disagree)* to 5 (*Strongly Agree).* Four items measure work-to-family positive spillover (e.g., "When things are going well at work, my outlook regarding my family life is improved," "Being in a positive mood at work helps me to be in a positive mood at home"). In addition, four items measure family-to-work positive spillover (e.g., "When things are going well in my family life, my outlook regarding my job is improved," "Being in a positive mood at home helps me to be in a positive mood at work"). Time 2 values of work-to-family and family-to-work positive spillover were included in the longitudinal model as outcomes of the proposed resources and Time 1 values of work-to-family and family-to-work positive spillover were included as outcomes in the cross-sectional model. Reliability for this scale was .80 for work-to-family positive spillover and .88 for family-to-work positive spillover.

Decision latitude. Decision Latitude was measured using items from the Job Content Questionnaire (JCQ) developed by Karasek (1979). This measure consists of 8 items to which respondents are to indicate agreement/disagreement on a 5-point scale ranging from 1 (*Strongly Disagree)* to 5 (*Strongly Agree).* Four items measure Skill Discretion (e.g., "My job requires that I learn new things") and four items measure Decision Authority (e.g., "My job allows me to make a lot of decisions on my own".) Reliability was .74 for the Skill Discretion subscale and .66 for the Decision Authority subscale. One item was dropped from the Decision Authority subscale as the reliability increased from .58 to .66 with the deletion of this item ("I have a lot to say about what happens on my job"). It is important to note that the skill discretion

and decision authority subscales are calculated separately and then these two subscales are added together to create the decision latitude scale (Karasek, 1991). Reliability for the total Decision Latitude scale with the item deleted was .74.

Family-supportive culture. Family-supportive culture was measured using a scale developed by Kossek, Colquitt, and Noe (2000). This scale consists of 3 items which ask respondents the degree to which they agree or disagree (using a 5-point scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*) with a series of statements that measure an organization's work climate for sharing family concerns. Three items measure climate regarding family concerns (e.g., "In my company, it is generally accepted that people might share concerns about their family"). Reliability for the climate for sharing family concerns subscale was $\alpha = .80$, and climate for making sacrifices, $\alpha = .74$.

Income adequacy. Income adequacy was measured using a one-item question with a 4-point scale measuring the family's ability to get along on total household income. The item reads, "Which of the following describes your ability to get along on your income" Response options vary from 1: "We just can't make ends meet" , 2: "We have just enough, no more", 3: "We have enough, with a little extra", 4: "We always have money left over."

Level of education: Level of education was measured using a one item question regarding the highest level of education that one has completed. Response

options include, "Some high school, High school diploma or GED, Some college or associates degree, Bachelor's Degree, and Graduate Degree."

Relationship status. Relationship status was measured with an item indicating one's relationship status. Response options include "Married, divorced or separated, widowed, living as married, never married." This item was used to create a dichotomous variable indicating relationship status (married or living as married/not married).

Parental status: To measure parental status, a variable was created using the following survey item: "What are the ages of your children living at home?" Responses, which included having at least one child living at home who is less than or equal to eighteen years of age, were coded as 1 (children) and missing responses or a child over the age of 18 living at home were coded as 0 (no children).

Physical health. Physical Health was measured with the SF-12 (v2) seven-item physical composite score (Ware, Kosinski, & Keller, 1996). A sample item is "During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular activities as a result of your physical health?" The physical health composite variable to be used in the proposed analyses was created using the following procedures. Raw score scales were created for the physical health subscale and then the scale scores were transformed to a 0-100 scale. Norm-based composite subscales were created according to the SF12v2 guidelines. The reliability

for the Physical Health Composite Score of the SF-12 is .89, as reported in the SF-12 manual and as demonstrated in a variety of national samples.

Mental health. Mental Health was measured with the SF-12 (v2) seven-item physical composite score (Ware, Kosinski, & Keller, 1996). A sample item is "During the past 4 weeks, how much of the time have you felt down hearted or depressed?" The mental health composite variable to be used in the proposed analyses was created using the following procedures. Raw score scales were created for the mental health subscale and then the scale scores were transformed to a 0-100 scale. Norm-based composite subscales were created according to the SF12v2 guidelines. The reliability for the Mental Health Composite Score of the SF-12 is .86, as reported in the SF-12 manual and as demonstrated in a variety of national samples.

Control variables: In line with Becker's (2005) recommendation for treating control variables, I correlated all proposed control variables with the dependent variables of time 2 work-to-family positive spillover and time 2 family-to-work positive spillover. I chose gender, job level, age, elder-care responsibilities and hours worked as control variables due to fact that pre-existing relationships between these variables and work-family outcomes have been established in the literature (e.g., Frone et al., 1992; Plack, 1977; Neal & Hammer, 2007). In addition, I tested for differences among banners in order to make the decision of whether or not to add banner as a control variable. See Appendix B for a list of scale items for variables to be measured at time one and those to be measured at time two.

Analyses

Relationships over time can be examined in several ways, and the choice of analysis largely depends on the research question. Often, longitudinal studies are used to predict *change* in a variable. To do so, a change score can be used (e.g., Time 2 – Time 1 = Amount of change), or the effects of the dependent variable at Time 1 can be controlled in the analysis. Both cases involve predicting *changes* in outcome variables. However, the current study was interested in predicting the level of time 2 variables from time 1 resources rather than examining change over time. Thus, for this particular study, the focus was the *level* of positive spillover at Time 2 predicted by Time 1 resources, not the amount of change experienced. No intervention had been introduced for these participants, so little change was expected to occur and the effects of Time 1 positive spillover were not included in the model when testing the longitudinal effects.

In addition to the longitudinal analyses, the hypotheses were tested cross-sectionally. Specifically, the same model was tested using time one work-to-family and family-to-work positive spillover as the dependent variables rather than time two positive spillover. Due to the fact that the majority of research has examined these relationships using a cross-sectional design, the goal of the current study was to understand these cross-sectional relationships and go one step further by testing them longitudinally and then compare the cross-sectional with the longitudinal findings.

Structural Equation Modeling (SEM) was used to test the direct effects of the five types of resources on work-to-family and family-to-work positive spillover over time (See Figure 5). Zapf, Dormann, and Frese (1996) offer four advantages of using SEM to testing longitudinal relationships. First, measurement errors can be accounted for by the introduction of measurement models. This allows the causal relationships that are modeled between latent constructs to be error free. Second, SEM allows for complete and simultaneous testing of all the variables and relationships in the model. Third, when more than one dependent variable is present (e.g., work-to-family and family-to-work positive spillover) or when a variable acts as both an independent and a dependent variable, SEM is an appropriate statistical tool (Ullman, 1996). Finally, various method and third variable problems can be modeled such as occasion factors and common factor models that account for the effects of unmeasured third variables. With these advantages in mind, the current study tested the hypotheses using structural equation modeling in Mplus version 3. It is important to note that although respondents in this sample were nested within stores, the sample size was not high enough to warrant multi-level modeling. Further, t-tests were conducted to detect the existence of significant differences by store and job level (associate vs. supervisor).

For the SEM analysis, the first step in analyzing these relationships is to examine the overall fit of the proposed model. Due to the fact that there is no single significance test in SEM as there is in regression or analysis of variance (ANOVA), model fit was assessed by examining several fit indices. A nonsignificant χ^2 indicates

good fit. However, because χ^2 is sensitive to sample size, good models may be inappropriately rejected (Ullman, 1996). Thus, several other fit indices have been created which assess model fit from various perspectives.

Categories of indices exist to evaluate model fit including comparative fit indices, noncentrality based indexes, absolute fit indices and various others. With regards to the fit indices provided in Mplus, Muthen and Muthen (2006) discuss their philosophy to provide one fit statistic from several different families of fit statistics rather than many fit statistics from one family and note that they chose fit statistics based on which performed well for a family. They note that often people look at several fit statistics from the same family and conclude that model fit is good without realizing that the fit statistics are really one and the same. The three main fit indices provided in Mplus output include, CFI, RMSEA and S-RMR.

The CFI is a comparative fit index which compares the tested model to an independent model, where the variables are completely unrelated to one another, and to a saturated model, where all the variables are perfectly related. The tested model is placed along a continuum between the independent and the saturated models, yielding a descriptive statistic of 0 to 1. Values of .95 or greater are indicative of a model with good fit (Hu & Bentler, 1999).

The Root Mean Square Error of Approximation (RMSEA) is a noncentrality-based index. Instead of comparing the model to one with a perfect fit (i.e., where chi-square is equal to zero), RMSEA compares the model to the estimate of a best possible

fit given the degrees of freedom in the model. Scores of..05 and less are generally considered to demonstrate good fit (Hu & Bentler, 1999).

Finally, the Standardized Root Mean Square Residual (S-RMR) is an absolute fit index. Absolute fit indices do not use an alternative model as a base for comparison. They are simply derived from the fit of the obtained and implied covariance matrices and the maximum likelihood minimization function. Hu and Bentler (1999) empirically examine various cutoffs for many of these measures, and their data suggest that to minimize Type I and Type II errors under various conditions, one should use a combination of a relative fit index and the S-RMR (good models < .08) or the RMSEA (good models < .06).

Model fit was assessed in two steps. First, the measurement model was tested. This involves conducting a confirmatory factor analysis, where the relationships between the observed variables and their respective latent variable are assessed. The latent variables were correlated, but there were no direct paths between latent variables in the measurement model. Second, the structural model was tested and included direct paths between latent variables. Once the overall fit of the model was established, the individual path weights associated with the hypotheses were examined to see if the hypotheses were supported.

It is important to note that prediction of a dependent variable across time does not infer causality. Causal relationships can only be inferred via research design and specifically through experiments where all other potentially confounding variables are

controlled. The relationships in this study are correlational in nature. It cannot be determined for certain which variable is causing which. For instance, each resource is hypothesized to predict positive spillover, but it is plausible that role positive spillover, in fact, predicts the resources.

Although I cannot establish causality, the use of two waves of data in the analyses allows for stronger conclusions to be made because of the ability to rule out common method bias as a reason for significant results. Specifically, the longitudinal design allows us to avoid measurement context effects by separating predictor and criterion measurements in time (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

CHAPTER VI

Results

Data Cleaning

Missing Data

Although the data for this dissertation were collected via interviews resulting in virtually no missing data, there were still some important decisions to be made regarding the instances where missing data occurred. In these instances, the data were coded as missing using a -1. When data were not present due to the fact that the question was not applicable to a certain individual, a -7 was coded to represent a skip pattern. Finally, missing data were coded as -2 when two responses were checked off for one item. When it was necessary to make important decisions with regards to coding of data, the project manager was consulted, and all decisions were reported in the associate and supervisor codebooks. These types of decisions included instances where interviewers recorded more than one response option or an incorrect response that was illogical. For the current dissertation, I used mean imputation to replace existing missing values on continuous variables. I chose this method over case deletion to retain adequate power to conduct structural equation modeling. In addition, when calculating scales to be used in the current study analyses, a 66% rule was employed. Specifically, in order for a participant's score to be calculated for each scale, they must have answered 66% of the questions within that scale.

Preliminary Data Cleaning Analyses

In addition to scale computation and coding for missing data, several descriptive analyses were conducted as part of the overarching study to ensure the quality of the data. I inspected frequencies for each item and scale within the dataset in order to detect any potential outliers. If an outlier was present in the dataset, we went back to the survey to determine whether it was a data entry error. In these cases, notes were recorded in the code book. With regards to the current study variables, there were no notes recorded in the code book which allows me to draw the conclusion that there were no outliers on the current study variables. In addition to this preliminary data cleaning, I inspected the data for my sample a second time by running frequencies and item distributions on all study variables. There were two potential outliers on the mental health scale ($\mu = 7.03, 10.90$). After replacing these values with a missing data code, correlations were examined between mental health and physical health and the result remained a negative correlation ($r = -.18$). In addition, the models were re-run and the results still showed a negative relationship between mental health and work-to-family positive spillover ($\beta = -.18, p < .05$). Due to the fact that removing these outliers did not change the study hypotheses, I made the decision to leave these cases in the dataset rather than modeling them as missing data.

Finally, in order to ensure that the subset of employees from the control stores did not differ from those of the stores who received the training intervention, I tested

for differences on all study variables using the full dataset (control and experimental employees). Results of a series of t-tests only showed significant differences on the SF-12 mental health measure, t (354) = -2.32, $p < .05$ with the level of mental health for control stores ($\mu = 48.51$) significantly lower than the level of mental health for the experimental stores ($\mu = 50.81$). The remainder of study variables did not show significant differences between control and experimental stores.

Nesting Effects

To address the fact that associates are nested within stores and also nested within supervisors, a t-test was conducted to detect differences between supervisors and employees and results showed no significant differences between supervisors and associates for work-to-family positive spillover, t (196) = .43, $p > .05$ or family-to-work positive spillover, t (196) = 1.02, $p > .05$. In addition, I conducted an ANOVA to test for store differences on the outcomes of interest and no significant differences were detected between stores for work-to-family positive spillover, (F (5,192) = 1.80, $p > .05$) or family-to-work positive spillover, (F(5,192) = 1.19, $p > .05$). Thus, the data were combined for employees and supervisors and collapsed across the three banners for the purpose of further analyses.

Control Variables

In line with Becker's (2005) recommendation for identifying control variables, I ran analyses correlating all proposed control variables with the dependent variables of work-to-family and family-to-work positive spillover. Control variables included

gender, age, job level, hours worked and eldercare status. Results of these correlations showed no significant relationships between control variables and the dependent variables (see table 3). Thus, no control variables were included in the path model.

Sample Characteristics

As a reminder, the participants in the current study were employees and lower-level supervisors from the control stores of the overarching study. Participants were 67% female, 67% Caucasian and an average of 32 years old with one child living at home. Further, 55% were married or living as married and 29% reported a child living at home under the age of 18. With regards to job level, 87% of participants worked as associates with 13% as supervisors. Participants worked an average of 4.71 days per week and 32.9 hours with 46.5% working full time and 36.9% working part time. On average, participants had worked for the store for approximately 7 years (see Tables 4 and 5). With regards to the study variables, the mean level of work-to-family and family-to-work positive spillover (Hanson et al., 2006) at time one was 3.88 and 3.89 and at time two, 3.86 and 3.92 respectively. These values correspond to moderate to high reports of positive spillover. Reports of decision latitude (Karasek, 1979) averaged at 2.88 with the subcomponents of skill discretion and decision authority at 2.93 and 2.65. These means indicate low levels of decision latitude in this sample. Climate for sharing family concerns (Kossek et al., 2000) averaged at 3.48 corresponding to a moderate level of support. Participants report an average income adequacy of 2.63 which falls between the response of having just enough income and

having enough with a little left over. Specifically, 49% reported a high school degree (response option 2) and 33% reported some college (response option 3). Average physical and mental health at 51.42 and 48.59 on a scale of 0 to 100 corresponding to average levels of self-reported health. See Tables 4-7 for variables means, standard deviations, and frequencies.

Structural Equation Modeling (SEM)

Longitudinal Measurement Model

Structural equation modeling was used to examine the relationship between the proposed resources at time one and the outcomes of work-to-family and family-to-work positive spillover at time two. However, before hypothesis testing could occur, confirmatory factor analysis was conducted to assess overall model fit. The measurement model was tested in Mplus before running the path model and both latent and manifest variables were included in this measurement model. The latent variables include decision latitude, family supportive culture, time two work-to-family positive spillover, and time two family-to-work positive spillover. The manifest variables included time one income adequacy, relationship status, parental status, education, physical health and mental health. It is important to note that these variables were modeled as manifest variables because they were either composite scores (e.g., physical health and mental health) or ordinal variables (income adequacy, relationship status, parental status, education). All of the variables were correlated and any direct paths between the latent variables were omitted. The results of the initial

measurement model showed two items (item 5 and item 8) within the decision latitude scale that were not highly loading onto the latent variable. These two items were removed from the measurement model which resulted in better model fit. Thus, these two items were dropped from analyses from that point forward.

Similarly, further analyses revealed that the two subscales comprising the family-supportive culture scale were not designed to measure one overarching construct but to measure the subscales separately. Thus, the measurement model was tested in three ways. One used the subscale measuring climate for making family sacrifices. The second included the subscale measuring climate for sharing family concerns and the final included both subscales loading onto their distinct latent variables. Results of these tests showed model fit to be best when including only the subscale measuring climate for sharing family concerns. Thus, from this point forward, climate for sharing family concerns was used to test the flexibility resource proposed as family supportive culture.

The criteria used to assess model fit were as follows: CFI $\geq$ .95, RMSEA $\leq$ .06, S-RMR $\leq$ .08. The Chi-Square test of model fit, (X^2 (215) = 354.05), was significant indicating rejection of the null hypothesis that the model fits the data. However, because χ^2 is sensitive to sample size, good models may be inappropriately rejected (Ullman, 1996). Thus, several other fit indices have been created which assess model fit from various perspectives. Although the CFI was below the criteria of .95, two

other measurement model fit indices indicate good model fit with CFI= .90, RMSEA =.06, and S-RMR = .08 (See Table 1).

Longitudinal Path Model

When testing the path model in Mplus, each latent variable (decision latitude, family supportive culture, work-to-family positive spillover, and family-to-work positive spillover) was included along with each of the observed variables (income adequacy, relationship status, parental status, education, physical health, mental health). Again, the criteria used to assess model fit were as follows: CFI $\geq$ .95, RMSEA $\leq$ .06, S-RMR $\leq$ .08. The chi-square test of model fit, (X^2 (196) = 323.07), was significant thus rejecting the null hypothesis that the model fits the data. Similar to the measurement model, two of the fit indices indicate good model fit for the path model with CFI= .91, RMSEA =.06, and S-RMR = .06. It is important to note that the model is not considered to have "great" fit due to the fact that the CFI is below the criteria of .95. Although there was only a slight change in the fit indices when comparing the measurement model with the path model, I conducted a chi-square difference test to see if there was significant improvement in the fit of the path model. The χ^2 difference between the two models was significant (χ^2 (19) = 30.95, p <.05); thus, the path model fit significantly better than the measurement model. See Table 1 for a summary of the fit indices for the longitudinal measurement and path model.

Cross-Sectional Structural Equation Model

One of the goals of the current study was to examine the proposed hypotheses longitudinally as well as cross-sectionally. Thus, in addition to the longitudinal structural equation model, a cross-sectional model was tested using time 1 values of positive spillover rather than time 2 values as the dependent variables. Again, the criteria used to assess model fit were as follows: CFI $\geq$ .95, RMSEA $\leq$ .06, S-RMR $\leq$ .08. For the cross-sectional measurement model, the chi-square test of model fit, (X^2 (215) = 363.17), was significant thus rejecting the null hypothesis that the model fits the data. The fit indices indicate adequate model fit with CFI= .87, RMSEA =.07, and S-RMR = .09. For the path model, the chi-square test of model fit, (X^2 (196) = 320.82), was significant thus rejecting the null hypothesis that the model fits the data. The fit indices indicate adequate model fit with CFI= .89, RMSEA =.06, and S-RMR = .08. The fit indices for the cross-sectional path model slightly increased over the measurement model and the χ^2 difference between the two models was significant (χ^2 (19) = 42.35, p <.05); thus, similar to the longitudinal model, the cross-sectional path model fit significantly better than the measurement model. See table 2 for a summary of fit indices for the cross-sectional measurement and path models.

Model Comparison

A chi-square difference test could not be conducted to compare the cross-sectional path model to the longitudinal path model because the two models are estimating the same number of parameters and as a result, have the same degrees of freedom. Thus, additional fit indices including the baseline Chi-Square, AIC and

BIC were examined to compare these two models. Results indicate fit indices for the longitudinal model as, AIC = 7775.13, BIC = 7955.83, Chi-Square = 1621.10. Fit indices for the cross-sectional model include, AIC = 8807.29. BIC = 8987.99, Chi-Square = 1350.39. Smaller fit indices indicate better model fit, thus the longitudinal model is a better fit for the data than the cross-sectional model.

Now that model fit has been established, the following section examines specific path loadings in the model in order to test the study's hypotheses.

Longitudinal Hypothesis Testing

To investigate Hypotheses 1 through 10, the specific parameter estimates in the model were examined for each hypothesis (See Appendix C for a summary of study hypotheses). Figure 6 shows the final path model with the corresponding regression weights for the longitudinal model and Figure 7 shows the corresponding regression weights for the final cross-sectional path model. Regressions weights with a critical ratio (i.e., parameter estimate/standard error) of 1.96 or greater are considered to be statistically significant at the $p < .05$ level. See table 8 for a summary of time one and time two path model regression weights.

Hypothesis 1 predicted that decision latitude at time one would be a significant and positive predictor of work-to-family positive spillover at time two. Decision latitude was not a significant predictor of work-to-family positive spillover ($\beta = .-.01$, $p > .05$) and hypothesis 1 was not supported. Hypothesis 2 predicted that family supportive culture at time one would be a significant and positive predictor of work-

to-family positive spillover at time two. Family supportive culture at time one was not significantly related to work-to-family positive spillover at time two and this hypothesis was not supported (β = .-.02, p > .05). Hypothesis 3 predicted that income adequacy at time one would be significantly and positively related to work-to-family positive spillover at time two. This hypothesis was supported as income adequacy was significantly and positively related to work-to-family positive spillover at time two (β = .17, p < .05).

Hypotheses 4 and 5 proposed that level of education at time one would have a positive relationship with work-to-family and family-to-work positive spillover at time two. Level of education was not significantly predictive of work-to-family (β = .-.03, p > .05) or family-to-work (β = .00, p > .05) positive spillover at time two and hypotheses 4 and 5 were not supported. Hypotheses 6 and 7 predicted that physical and mental health would significantly and positively predict work-to-family and family-to-work spillover at time two. Physical health at time one was not significantly predictive of time two work-to-family (β = –.05, p > .05) or family-to work (β = .09, p > .05) positive spillover, and hypotheses 6 and 7 were not supported. Hypotheses 8 and 9 predicted that mental health would significantly and positively predict work-to-family and family-to-work positive spillover. Mental health resulted in a non-significant relationship with work-to-family positive spillover (β = -.14, p > .05) and a significant but negative relationship with family-to-work positive spillover (β = -.17, p < .05). Since the hypothesized relationship between mental health and family-to-work

spillover was positive in nature, neither hypothesis 6 or 7 were supported. Finally, hypothesis 10 proposed a significant and positive relationship between relationship status and family-to-work positive spillover and this hypothesis was not supported ($\beta = .04, p > .05$). The research question regarding parental status and family-to-work positive spillover was also non-significant ($\beta = .08, p > .05$).

Cross-Sectional Hypothesis Testing

In addition to examining these hypotheses longitudinally, I also explored the cross-sectional path coefficients. A couple of findings that differ from the longitudinal model emerged. Hypothesis 1 predicted that decision latitude would be a significant and positive predictor of work-to-family positive spillover. Decision latitude was not a significant predictor of work-to-family positive spillover ($\beta = .11, p > .05$) and Hypothesis 1 was not supported cross-sectionally. Hypothesis 2 predicted that family supportive culture would be a significant and positive predictor of work-to-family positive spillover and was not supported ($\beta = .-.04, p > .05$). Hypothesis 3 predicted that income adequacy would be significantly and positively related to work-to-family positive spillover. Similar to the longitudinal findings, income adequacy was significantly and positive related to work-to-family positive spillover ($\beta = .22, p < .05$).

Hypotheses 4 and 5 proposed that level of education would have a positive relationship with work-to-family and family-to-work positive spillover. Level of education was not significantly predictive of work-to-family ($\beta = .06, p > .05$) or

family-to-work ($\beta = .03, p > .05$) positive spillover and hypotheses 4 and 5 were not supported cross-sectionally.

Hypotheses 6 and 7 predicted that physical and mental health would significantly and positively predict work-to-family and family-to-work spillover. Physical health was not significantly predictive of work-to-family ($\beta = .-.08, p > .05$) or family-to work ($\beta = .03, p > .05$) positive spillover, thus hypotheses 6 and 7 were not supported cross-sectionally. Hypotheses 8 and 9 predicted that mental health would significantly and positively predict work-to-family and family-to-work positive spillover. Mental health resulted in a nonsignificant and negative relationship with both work-to-family ($\beta = .-.11, p > .05$) and family-to-work ($\beta = -.13, p > .05$) positive spillover. Thus, Hypotheses 8 and 9 were not supported cross-sectionally. Finally, Hypothesis 10 proposed a significant and positive relationship between relationship status and family-to-work positive spillover but this hypothesis was not supported ($\beta = -.04, p > .05$). Finally, the research question which explores the relationship between parental status and family-to-work positive spillover was significant ($\beta = .28$, $p < .05$), such those participants with children under the age of 18 living at home were more likely to experience family-to-work positive spillover than those without children under 18 living at home.

Follow-up Analyses

Longitudinal post-hoc *models.* Due to the fact that several of the non-significant findings were thought to be measurement related, I ran a number of post-

hoc models using different measures to test proposed resources when possible. Specifically, I replaced decision latitude with a scale measuring control over work hours (Hackman & Oldham, 1995) and I replaced the SF-12 mental health score with the CES-D (Radloff, 1977) scale measuring depressive symptoms. Finally, I replaced the measure of income adequacy with a measure of straight household income. Before running the new models, I tested the household measure of income in the original longitudinal and cross-sectional path models and the significant relationship between income and positive spillover disappeared. Thus, I ran the three new longitudinal models with a measure of income adequacy. It is important to note that the measure of control over work hours was not collected for the supervisors in the current sample. As a result, 27 cases of control over work hours were coded as missing when I ran the following models.

The first longitudinal model replaced decision latitude with the measure of control over work hours and the mental health scale with the CESD. The model fit indices were as follows: CFI = .89, RMSEA = .06, S-RMR = .07. With regards to hypothesis testing, job control was not significantly related to work-to-family positive spillover ($\beta = .07, p > .05$) and Hypothesis 1 was not supported. CES-D had a significant and positive relationship with work-to-family positive spillover ($\beta = .19, p < .05$) but is important to note that high values of CESD correspond to high levels of depression. Thus, in order to support the mental health hypothesis, a negative relationship should exist between CESD and positive spillover. This result does not

support Hypothesis 8 and reinforces the previous longitudinal finding with time one mental health negatively predicting time two work-to-family positive spillover.

The second longitudinal post-hoc model replaced decision latitude with control over work hours but did not replace the mental health scale. The model fit indices were as follows: CFI = .92, RMSEA = .06, S-RMR = .07. With regards to hypothesis testing, the relationship between control over work hours and work-to-family positive spillover was not significant ($\beta = .06, p > .05$) and Hypothesis 1 was not supported. Consistent with the original model, the relationship between mental health and work-to-family positive spillover was significant in the opposite direction as hypothesized ($\beta = -.18, p < .05$) and Hypothesis 8 was not supported in this model.

The final longitudinal post-hoc model replaced the mental health scale with CES-D but did not replace the decision latitude scale. The model fit indices were as follows: CFI = .86, RMSEA = .06, S-RMR = .07. Hypothesis testing for this model showed a non-significant relationship between decision latitude and work-to-family positive spillover ($\beta = .-.02, p > .05$) and a significant but positive relationship between CES-D and work-to-family positive spillover ($\beta = .17, p < .05$). Again, this significant relationship does not support the mental health hypothesis due to the fact that high values of CES-D correspond to poor mental health.

Cross-sectional post-hoc *models.* In additional to the longitudinal post-hoc models, the same three models were run using time 1 work-to-family and family-to-work positive spillover as the dependent variables. Similar to the longitudinal models,

the household measure of income was not significantly related to time one work-to-family and family-to-work positive spillover. Thus, the measure of income adequacy was used in testing these post-hoc models.

The first cross-sectional model replaced decision latitude with the measure of control over work hours and the mental health scale with the CES-D. The model fit indices were as follows: CFI = .897, RMSEA = .06, S-RMR = .07. With regards to hypothesis testing, job control was not significantly related to work-to-family positive spillover ($\beta = .09, p > .05$) and Hypothesis 1 was not supported cross-sectionally. CES-D significantly and positively predicted work-to-family positive spillover ($\beta = .24, p < .05$) but as noted previously high values of CES-D correspond to higher levels of depression. Thus, Hypothesis 8 was not supported cross-sectionally in this model.

The second cross-sectional post hoc model replaced decision latitude with control over work hours but did not replace the mental health scale. The model fit indices were as follows: CFI = .93, RMSEA = .05, S-RMR = .07. With regards to hypothesis testing, consistent with the original cross-sectional model, the relationship between control over work hours and work-to-family positive spillover was not significant ($\beta = .07, p > .05$). In addition, the relationship between mental health and time 1 work-to-family positive spillover was not significant ($\beta = -.11, p > .05$) and Hypothesis 8 was not supported.

The final cross-sectional post hoc model replaced the mental health scale with CES-D but did not replace the decision latitude scale. The model fit indices were as follows: CFI = .81, RMSEA = .06, S-RMR = .07. Hypothesis testing for this model showed a non-significant relationship between decision latitude and work-to-family positive spillover ($\beta = .09, p > .05$) and a significant but positive relationship between CESD and work-to-family positive spillover ($\beta = .22, p < .05$). Again, this significant relationship does not support the mental health hypothesis.

Follow-up regressions. Due to the large number of non-significant findings, I decided to run follow-up regression analyses in order to investigate the effects of each of the resources at time one directly on time two positive spillover, not taking into account any of the additional predictors. The majority of these regressions resulted in non-significant findings. However, time one decision authority, a subscale of the decision latitude scale, significantly and positively predicted time two work-to-family positive spillover ($\beta = .01, p < .05$). Further, time one parental status significantly and positively predicted time two family-to-work positive spillover as proposed by research question one ($\beta = .08, p < .05$).

Testing job satisfaction as a mediator. Due to the fact that Greenhaus and Powell (2006) suggest affective pathways in addition to instrumental pathways between the resources and cross-domain outcomes, I tested the indirect effect of the resources predicting work-to-family positive spillover through job satisfaction. The first step was to test the relationship between the work resources and job satisfaction.

The results showed a significant relationship between time 1 decision latitude ($\beta = .25$, $p < .05$), mental health ($\beta = .18, p < .05$) and income adequacy ($\beta = .15, p < .05$) with time 2 job satisfaction. However, time 2 job satisfaction was not significantly predicted by time 1 climate for sharing family concerns ($\beta = .07, p > .05$), physical health ($\beta = .05, p > .05$) or education ($\beta = -.01, p > .05$). The next step was to test the relationship between time 2 job satisfaction and time 2 work-to-family positive spillover and this result was not significant ($\beta = .06, p > .05$). These analyses were also conducted using time 1 job satisfaction and a similar non-significant relationship between job satisfaction and positive spillover resulted. Thus, there were no indirect effects of the work domain resources through job satisfaction on positive spillover. The same analysis would have been conducted for the family domain resources through family satisfaction if a measure of family satisfaction were available in this archival dataset.

Follow-up descriptive analyses. In addition to the post hoc models and regression analyses, I conducted several descriptive analyses in order to detect any problems with the data such as coding or scale construction errors. No problems were detected from these analyses. In addition, I conducted correlation analyses between the positive spillover constructs and scale items for decision latitude and family supportive culture in order to further ensure there were no errors in scale computation. Results showed no significant correlations between positive spillover and items coping the latent variables (includes decision latitude and family supportive culture items).

Finally, correlations were run on the remainder of proposed resources and positive spillover. Aside from a significant correlation between family-to-work positive spillover and parental status ($r = .09$, $p < .05$), the remainder of resources (physical health, mental health, level of education, relationship status) had non-significant correlations (See table 3).

Given these post hoc analyses, I feel confident in the results provided by the structural equation models and will now turn to a discussion of these significant and non-significant results.

CHAPTER VII

Discussion

Although the majority of the proposed hypotheses were not supported, there are significant and non-significant results that offer important contributions to future positive spillover research. I will structure this discussion into three main sections. First, I will begin with a discussion of the significant longitudinal (H3) and cross-sectional findings (H3 & RQ1). Next, I will move to a discussion of the hypotheses that were not supported and introduce two reoccurring limitations. Specifically, I will discuss the measurement related concerns of the non-significant hypotheses, followed by sample related concerns. In addition, where applicable, I will discuss the post-hoc analyses and offer implications for these findings. Finally, I will discuss the theoretical and practical implications of my results, discuss potential limitations, and provide suggestions for future research.

Before offering a detailed discussion of the findings, it is important to point out the secondary nature of the current study. Given the fact that archival data were used to test the proposed hypotheses, some constraints existed with regards to measurement and sample size. Specifically, I did not have the benefit of measuring latent constructs for several of the hypotheses and often resorted to measuring constructs using 1-item measures. In addition, the sample size was limited as I was restricted to using only the control store employees and supervisors in order to avoid intervention effects.

Significant Hypothesis Tests

This section will focus on the significant hypotheses from both the longitudinal and cross-sectional path models and emphasize the study implications related to these relationships. Specifically, I will begin with a discussion of Hypothesis 3 examining the relationship between income adequacy and work-to-family positive spillover followed by a discussion of the Research Question 1 which examined the relationship between parental status and family-to-work spillover.

Hypothesis 3

Hypothesis 3 focused on the material resource of income adequacy and proposed that income adequacy at time one would be a significant and positive predictor of work-to-family positive spillover at time two. This relationship was significant both longitudinally and cross-sectionally and supports the proposition that income is a material resource obtained in the work domain and facilitates positive outcomes in the family domain. This finding has implications for the growing body of financial stress literature as research has shown that a lack of income is a stressor related to negative outcomes such as decreased life satisfaction. Specifically, research has established that financial strain leads to poor physical health and marital dissatisfaction (Olivius et al., 2004; Conger et al., 1994). Thus, financial strain reduces a person's satisfaction as it relates to health and family. Research and theory suggest that these health and marital quality ratings affect a person's overall life satisfaction (Brief et al., 1993; Glen, 1990).

Rather than viewing income as a stressor, the current study examined it as a resource that has energizing effects on individuals that spillover into the family domain. Similar to the findings of Barnett and Hyde (2001) and Hill et al. (2007), the current study found that income adequacy actually facilitates the work-family interface. It is encouraged that future research examining financial strain also incorporate the idea of financial adequacy in order to expand upon the current finding and understand more about income as a facilitating resource. However, it is important to note that this finding was based on a rating of household income adequacy and thus also may be contingent upon possible partner income. Specifically, the mean response to the income adequacy scale was 2.63 falling between the responses of "we have just enough, no more" and "we have enough, with a little extra, sometimes." In addition, the median level of self-reported household income was 2.0 corresponding to "$25,000-$40,000 in the past 12 months." It is important to point out that individuals and their families manage their income and may report "having just enough" regardless of the actual dollar amount. With this in mind, when examining income adequacy as a work-domain resource, we should note that the extent to which pay acts as a facilitating resource may differ by the individual and the household's "need" and their management of income. Thus, we must be careful when drawing conclusions about income adequacy as a work domain resource when using household measures.

Research Question 1

A research question was posed to investigate the relationship between parental status at time one and family-to-work positive spillover at time two. Although the longitudinal analysis was not supported, this relationship was significant cross-sectionally. That is, the presence of children under the age of 18 at time one acted as a family domain resource facilitating positive outcomes in the work domain. The different relationships between parental status and family-to-work positive spillover are difficult to interpret from the measure used in the current study. Specifically, parental status was measured by the presence of children living at home under the age of 18. Since this measure gives little information about the nature of the parent child relationship, we simply know that having children acts as an immediate resource to the work-domain. However, if we knew more about the types of resources and rewards obtained from being a parent, we might be able to test this relationship more specifically and with more targeted aspects of the relationship. Thus, more information is needed with regards to the positive aspects of parenting. It is suggested that future research use an alternative measure of child rewards or parent role quality (e.g., Barnett, 1994) to test this hypothesis in order to understand more about the cross-sectional vs. longitudinal relationship. In general, this finding encourages future research to take time and context into consideration when hypothesizing relationships between work and family domain resources and positive spillover.

Non-Significant Hypothesis Tests

With regards to the non-significant results, I will begin with a discussion of the concerns related to the measurement of the resources in the work and family domains. Specifically, I believe that alternative measures would have yielded more accurate hypothesis testing, and I will offer a more detailed explanation of this as I move through the discussion of my results. A second reoccurring theme that I will discuss in this section is related to the nature of the current sample. Due to the fact that retail work is less flexible and characterized by low-income employees, some of the resources proposed may not be as prevalent as in other industries. In addition, as pointed out previously, the grocery chain surveyed in the current study is characterized by even less flexibility than general retail organizations. Again, I will offer a more detailed account of this explanation as I move through the discussion.

Measurement Concerns

The major concern of the current study is related to the measurement of the resources in the work and family domains. In this section, I will review measurement concerns related to the non-significant hypotheses of the current study.

Hypothesis 1. Hypothesis 1 predicted that decision latitude at time one would be a positive predictor of time two work-to-family positive spillover. This hypothesis was not supported in the longitudinal or the cross-sectional structural equation models. I suggest that this non-significant relationship between decision latitude and work-to-family positive spillover is likely related to: 1) the measurement of decision latitude and 2) the nature of the job. With regards to the measurement of decision latitude, the

items measured in the subscales are lacking face validity, particularly those included in the skill discretion subscale. Decision latitude is defined as one's perception of control on the job (Karasek, 1979) and on the surface, skill discretion items do not clearly measure job control. The skill discretion items include, "my job requires that I learn new things," "I have an opportunity to develop my own special abilities on my job," "My job requires a high level of skill," "I get to do a variety of things on my job," "My job requires a lot of repetitive work," and "My job requires me to be creative." These items are intended to measure the idea that employees have control to decide how their knowledge is used and developed. However, it is difficult to see how a high level of skill or the requirement to be creative is really measuring job control. On the other hand, the items composing the decision authority subscale include, "my job allows me to make a lot of decision on my own" and "on my job, I am given a lot of freedom to decide how I do my work" (Note that the third decision authority item was dropped due to poor reliability), seem to provide more face validity. However, with only two items, the scale which is measuring a latent construct may not be powerful enough to significantly predict positive spillover. Thus, future research should consider the measurement and the face validity of this decision latitude scale and potentially examine other measurement scales. To the author's knowledge, only one study has found a significant relationship between decision latitude and positive spillover (e.g., Grzywacz & Marks, 2000) and they measured decision latitude using four items adapted from the Whitehall Health Survey (e.g., "How often do you have a choice in deciding what tasks you do at work?").

Hypothesis 2. Hypothesis 2 predicted that family-supportive culture would be significantly and positively predictive of work-to-family positive spillover. Similar to Hypothesis 1, this hypothesis was not supported in either longitudinal or cross-sectional analyses. As mentioned previously, after further investigation, I learned that the two subscales of this scale are designed to be kept separate with one scale measuring climate for making family sacrifices and one scale measuring climate for sharing family concerns. Including the climate for sharing family concerns subscale resulted in better fit than including both subscales as independent latent constructs or including only the subscale measuring climate for making family sacrifices. Thus, I also used this subscale to test this hypothesis. The idea of sharing family concerns at work is slightly different from the construct of family-supportive culture which I was intending to measure. The items measuring climate for sharing family concerns include: How likely is it that employees, "might share concerns about their family at work," "can get advice on how to deal with family issues," and "can talk about family problems." These items are all related to orally discussing family concerns. However, there are aspects of a family supportive work environment that exist aside from opportunities to verbally discuss family. For example, offering family supportive benefits such as flexible work schedules or telework options have been shown to predict increased employee perceptions of family supportive culture (Allen, 2001). Thus, I believe that future research may be more successful in exploring this relationship using more established measures of family supportive culture (e.g., Thompson et al., 1999; Allen, 2001).

Hypotheses 4 & 5. Hypotheses 4 and 5 proposed that education at time one would be a significant and positive predictor of work-to-family and family-to-work positive spillover at time two and these hypotheses were not supported longitudinally or cross-sectionally. These non-significant findings are mostly like the result of a median education score of 2.0 (σ = .78) which corresponds to "high school diploma or GED". Although the responses ranged from 1 to 5, frequency analysis revealed that only 20 participants had a bachelors or graduate level degree. Thus, there is a limited variability in responses to this item and there may not be enough variance in education levels to understand the relationship with work-to-family and family-to-work positive spillover. Also related to measurement, future research should measure the resource of skills and perspectives using skill based measures specific to the work and family domains. Specifically, I would suggest a measure of skills learned on the job (e.g., multi-tasking, customer service skills) and a measure of the perspectives gained from non-work activities or by caring for others (e.g., patience, cultural perspectives, perseverance).

Hypotheses 6 & 7. Hypotheses 6 and 7 proposed physical health to be a significant and positive predictor of both work-to-family and family-to-work positive spillover. These hypotheses were not supported longitudinally or cross-sectionally. The non-significant results may be due to the fact that theoretically, health is studied as an outcome rather than a predictor. However, given the fact that the cross-sectional relationship between physical health and positive spillover was not significant, there may be alternative explanations. Similar to the other non-significant hypotheses, I

suggest an alternative explanation may be measurement-related. Specifically, the SF-12 scale, which was used to measure physical health, primarily focuses on ailments (or lack of ailments). Ideally, when predicting an outcome such as positive spillover, physical health as a resource would be measured from a positive perspective in order to capture high levels of well-being rather than a lack of ailments. It is a stretch to infer high physical health from a lack of physical pain or discomfort as measured by the SF-12 physical composite score. For example, if an individual reports no problems with moderate physical activities as measured by the SF-12, it does not necessarily imply that this individual has a high level of energy or physical health. This idea of matching predictors to outcomes has been referred to as the double match or triple match principles in the stress literature (DeJonge & Dormann, 2006). The triple match principle (TMP) proposes that the strongest interactive effects of stressors and resources are observed when stressors, resources and strains are based on qualitatively identical dimensions. Specifically, if a stressor is emotional, cognitive, or physical in nature, it will most likely result in a strain and be mitigated by a resource of the same nature. For example, if an employee is experiencing the stress of emotional labor then burnout or emotional exhaustion is most likely to result (e.g., Grandey, 2003). The triple-match principle would suggest that an emotional resource such a social support would best mitigate this emotional stressor-strain relationship.

Although this theory has never been applied to positive outcomes, I argue that the positive or negative measurement of resources should be in alignment with the outcome that is being predicted. Specific to the current study, I argue that the

measurement of the resources should have the ability to capture the positive aspects of the resource rather than just assuming that the absence of negative health reports implies the presence of good health. In sum, I believe that the triple match theory can be used as a guide for examining the types of measures most likely to predict positive versus negative outcomes.

Another criticism of the SF-12 is that scores range from 0 to 100, with 100 being complete absence of impairment and in the current study, the average physical health score was 51.42. This wide range of scores makes it challenging to understand what level indicates "good health" and what a mean that lies in the middle of this range is telling us about the health of our sample. According to the Utah Department of Health (2001), which used the SF-12 for a state wide health survey, the physical and mental composite health scores have little intuitive meaning because the range of possible scores varies considerably. Specifically, these health composite scores tend to vary over the life span and across age groups. Thus, it would not be logical to say that a physical health composite score of 45.43 means the same thing for a person who is 25 years old compared to a person who is 65 years old. With this in mind, it is difficult to say whether a mean of 51.42 represents "good" physical health in my sample.

Finally, Martin Seligman recently reviewed the growing field of positive health (Seligman, 2008). In this review he encourages an exploration of positive health as opposed to the mere absence of illness. He argues that positive health can be seen as a

buffer against physical and mental illness and that positive health can and should be operationalized. Finally, once operationalized, positive health may be a predictor of longevity, health costs, mental health in aging and other important outcomes (Seligman, 2008). Thus, the idea of measuring positive physical and mental health is a body of research that is flourishing out of the growing field of positive psychology.

In summary, I have reached two conclusions with regards to the measurement of physical health in the current study. First is the idea that the SF-12 physical composite scale primarily measures ailments and it is difficult to infer "good physical health" from the lack of ailments. I draw on DeJonge and Dormann's (2006) triple match principle to build a rationale for matching the measurement of predictor to criterion and I suggest that future research examine this relationship use a physical health measure that is positive in nature. Second, I point out the difficulty in interpreting the SF-12 scores due to the variability in responses.

Hypotheses 8 & 9. Hypotheses 8 and 9 proposed that mental health measured at time one would be a significant and positive predictor of work-to-family and family-to-work positive spillover at time two. Although neither of these hypotheses were supported, mental health was significantly and negatively related to family-to-work positive spillover across time. That is, higher levels of mental health predicted lower levels of spillover from family-to-work which is contrary to the findings of most research examining the relationship between general positive spillover and mental health (e.g., Grzywacz & Bass, 2003; Hanson et al., 2006). However, it is important

to note that the current study utilized the affective work-family positive spillover items developed by Hanson et al. (2006) and upon closer examination of the validation study, Hanson and colleagues found the instrumental measures of positive spillover to be positively related to work-to-family and family-to-work positive spillover and actually found a similar, although not significant, negative relationship between the affective items and mental health scores.

I propose the following explanation for this negative relationship. Due to the fact that the mean level of mental health was below average, I interpret this relationship as low levels of mental health predicting high family-to-work positive spillover. I suggest that if individuals are feeling low on mental resources, it is possible that other family-related resources could more easily spillover into the work domain. That is, the vulnerability of feeling low or depressed creates an avenue for the spillover of other resources. For example, the social support received from family members may be stronger than that of poor mental health and create the impression that poor mental health is predicting positive spillover. Thus, I am proposing a third variable may be responsible for the illusion that low mental health is leading to high levels of family-to-work positive spillover.

In addition, with a mean mental health composite score of 48.59, I suggest that the explanation for the non-significant relationship between work-to-family positive spillover is similar to that explaining the physical health hypotheses. This includes the criticisms of interpreting the SF-12 physical and mental health scores as well as

the idea that a measure capturing the positive mental health would more adequately predict positive spillover. One can draw on the broaden-and-build theory of positive emotions to understand the relationship between mental health and positive spillover. According to Fredrickson (2004), the broaden-and-build theory suggests that positive emotions such as enjoyment or happiness broaden one's awareness and lead to new and exploratory thoughts and actions. Over time this broadened awareness manifests in behaviors that serve to build skills and resources. Thus, the current study would have more accurately measured mental health as a resource if positive emotions such as enjoyment or happiness were measured.

Parkinson and colleagues (2006) echo my concern and call for the need of a measure of mental health that is positive in nature. They note that scales that focus on mental illness divide respondents into those who meet criteria for a mental illness and those who do not, but cannot distinguish average from good mental health. In addition, they create a positive measure of mental health called the WEMWBS which includes items such as, "I've been feeling useful," "I've been feeling optimistic about the future," and "I've been feeling good about myself." Future research should look into using this measure to capture the mental health as a positive resource.

Hypothesis 10. Hypothesis 10 proposed that relationship status would positively predict family-to-work positive spillover and this hypothesis was not supported longitudinally or cross-sectionally. Again, I propose that an explanation for this result is measurement related. Specifically, the single item predictor used to

assess relationship status does not provide information about whether this is a supportive relationship that acts as a resource in the family domain. Ideally, I would have preferred to test this hypothesis using a measure of spousal support in order to target the aspects of the relationship that act as a facilitating resource. The measure used in this study was not specific enough to capture the supportive aspect relationships that I was interested in exploring. Research that has found a relationship status to be related to positive spillover has used more specific measures of spousal or family support (e.g., Grzywacz and Marks, 2000; Aryee et al., 2005). Due to the fact that one's relationship with his/her partner is often complicated and changing from day to day, a measure of spousal support would more accurately measure social capital resources as defined by Greenhaus and Powell (2006). Greenhaus and Powell (2006) define social capital resources as the influence and information derived from interpersonal relationships in the work and family roles that may assist individuals in achieving their goals. Thus, it is very important that we are measuring the positive aspects of the relationship that influence and assist in opposite domain performance.

In addition to the measurement of this resource, it is important to note that relationships can be equally demanding as they are facilitating. Work-family research has found relationship status to be a demand predicting work-family conflict (Byron, 2005) and as a resource predicting work-family positive spillover. Thus, simply gathering relationship status information does not give us enough information to test the variable as a resource.

In addition to the measurement concerns, the characteristics of the grocery industry also act as a reoccurring limitation in the study hypotheses. The next section will review concerns regarding the effect of sample-related concerns on Hypotheses 1, 4, and 5.

Sample-Related Concerns

Hypothesis 1. A second explanation for the lack of support for Hypothesis 1, predicting work-to-family positive spillover from decision latitude, is related to the nature of the job. With average responses of 2.9 (σ = .45) and 2.6 (σ = .58) for skill discretion and decision authority, respectively which are lower than neutral (on a scale of 1-5 with 1 = strongly disagree and 5 = strongly agree), the employees surveyed do not feel that their job is characterized by decision latitude. This is a logical response in a population of grocery store employees in which the nature of most jobs does not offer a significant amount of variety. It is also important to point out the small standard deviations, indicating very little variability among employees' responses. With this in mind, the significant relationship between decision latitude and work-to-family positive spillover found by Grzywacz and Marks (2000) may be enhanced by the variety of occupations included in their sample from the National Survey of Midlife Development in the United Sates (MIDUS). Thus, it is important to keep the nature of the job in mind when measuring decision latitude.

Finally, it is important to note that post-hoc regression analyses showed the subscale of decision authority at time one to be significantly predictive of time two

work-to-family positive spillover (not controlling for any of the other predictors). On an analysis note, structural equation models were analyzed with both the overall decision latitude scale and with the decision authority subscale and overall model fit was better when all decision latitude items were included. An explanation for the significant post hoc finding with decision authority may be related to the face validity concern noted previously. Specifically, decision authority may have directly predicted work-to-family positive spillover because this subscale provides more face validity with regards to job control and as a result, better captured the idea of decision latitude.

Hypotheses 4 & 5. Hypotheses 4 and 5 proposed that education at time one would be a significant and positive predictor of work-to-family and family-to-work positive spillover at time two and these hypotheses were not supported longitudinally or cross-sectionally. In addition, it is important to keep in mind the characteristics of jobs within the grocery industry and how skills obtained through education may or may not directly transfer to the job depending on the type of degree (Hypothesis 9). With the grocery positions requiring little or no formal education (Gottlieb, 2006), it is possible that education may not be a necessary resource for job performance or job satisfaction and as a result, does not create positive spillover from work-to-family or family-to-work. These relationships may be more realistic in white collar occupations where opportunities exist to directly apply skills derived from education in addition to opportunities for advancement and a higher level of motivation to develop advanced skills.

Post Hoc Analyses

Post-hoc Structural Equation Models

With regards to the post-hoc structural equation models, replacing the construct of decision latitude with control over work hours did not improve model fit or change the outcome of the hypothesis testing longitudinally or cross-sectionally. With mean values of control over work hours at 2.59, the conclusion is similar to that of the non-significant relationship between decision latitude and work-to-family positive spillover. Specifically, due to the nature of the job, employees do not report much control over their work hours. Thus, it can be concluded that employees in this sample had low levels of flexibility resources (decision latitude and control over work hours) and as a result, these resources did not spillover or facilitate family domain performance.

Replacing the SF-12 mental health score with the CES-D measure of depressive symptoms improved model fit in both the longitudinal and cross-sectional models but did not change the outcome of the hypotheses. CES-D resulted in a positive relationship with both work-to-family and family-to-work positive spillover such that higher levels of depressive symptoms are related to higher levels of positive spillover. This is the opposite of the hypothesized relationship but is similar to the negative relationship found between mental health and work-to-family positive spillover in the original longitudinal model. Again, I suggest the reason for this result

is related to the idea that the CES-D measure was created to diagnose depression and captures negative health rather than positive health.

Job Satisfaction as a Mediator

It is also important to discuss the non-significant indirect effect of the work-domain resources through job satisfaction. Specifically, three of the five domain resources predicting work-to-family positive spillover were significantly related to job satisfaction (decision latitude, mental health, and income adequacy) but job satisfaction was not significantly predictive of positive spillover. This finding provides more information about the non-significant study hypotheses as we reveal that the resources do generate a significant amount of domain specific positive affect (job satisfaction) but this work domain positive affect does not spillover into the opposite domain. Although it is not proposed as part of the current study, it can be concluded that I have successfully tested pathway number 2 in Greenhaus and Powell's (2006) model which is the path from work domain resources in role A predicting positive affect in role A (see Figure 4). However, I have failed to support path 4 which links positive affect in role A to high performance in role B.

Implications

Research Implications

As noted by Wayne et al. (2006), in order to more accurately make practical recommendations about strategies to foster enrichment, research must identify its

antecedent factors. The goal of the current study was to answer this call and begin to identify a set of concrete antecedents that can facilitate work and family relationships. They also note that enrichment's importance to organizations will not be well understood until other work-related consequences are examined (Wayne et al., 2006).

As mentioned previously, the significant predictors of income adequacy (longitudinal) and parental status (cross-sectional) give us reason to believe that resources do exist in the work and family domains that facilitate cross-domain outcomes. Although the majority of the proposed resources were not significantly predictive, I suggest that this is measurement related and strongly encourage future research to test the resources using the type of measures suggested above. The current study took a first step in understanding the antecedents of positive spillover and should be used as a starting point for positive spillover research to move forward and test additional resources.

Although the hypothesis testing had mixed results in the current study, the model fit and model comparisons offer substantial contributions to the work family literature. To the author's knowledge, this was the first study to test the antecedents of positive spillover using both longitudinal and cross-sectional research designs. Further, the results of model comparison tests showed the fit of the longitudinal path model to be superior to that of the cross-sectional model. Thus, the current study provides evidence that the relationships between the antecedents of positive spillover can manifest differently over time. Specifically, we saw that the relationship between

parental status and positive spillover was only significant in a cross-sectional context. Thus, future research must give thought to measurement techniques as we know workplaces and families are quite dynamic and resources may fluctuate from day to day. For example, the resource of parental status may be more adequately measured in a daily diary longitudinal study in order to capture the change intricacies of parenting. In addition, certain resources may be more distally predictive of positive spillover (e.g., mental health) whereas others may be more proximally predictive of spillover (e.g., parental status) and others may be predictive both proximally and distally (e.g., income adequacy). These results inspire new ideas for positive spillover research. Specifically, when hypothesizing the relationship between resources and outcomes, hypotheses should be developed with the idea that some resources may have different relationships with positive spillover when time is taken into consideration. Thus, I encourage future research to continue testing resources both cross-sectionally and longitudinally in order to learn more about the manifestation of these relationships.

Although this study is just a first step, establishing the antecedents of positive spillover will ultimately help researchers to understand how we reach the beneficial outcomes associated with positive spillover. Thus far, research on the outcomes of positive spillover has shown relationships with higher job satisfaction, higher levels of affective commitment to the organization, and an increased likelihood to stay with the organization (Balmforth & Gardner, 2006). In addition, those reporting high levels of facilitation have also been shown to exhibit more organizational citizenship behaviors.

When employees feel support or a sense of accomplishment from involvement in family activities, they report working more efficiently, feel more confident and positive, and are more energized for their role at work.

Finally, the significant relationship between the work domain resources of income adequacy and decision latitude with job satisfaction has implications for future tests of Greenhaus and Powell's (2006) model. As stated previously, these significant findings provide support for path 2 in Greenhaus and Powell's model and support the proposition that resources generated in role A will lead to positive affect in role A.

Implications for Practice

Although future research is still needed to fully understand the outcomes associated with positive spillover, it is clear that there are positive organizational outcomes associated with holding multiple roles (e.g., performance, satisfaction, commitment, organizational citizenship behaviors). The current research has been focused on understanding how organizations can help their employees to experience this spillover. The results showed the mechanism of income adequacy established in the work-domain as a material resource predictive of family domain outcomes. Loosely speaking this could be interpreted that an organization providing adequate income will facilitate employees' work-life integration more than an organization that does not offer sufficient payment arrangements. This money earned through employment can be used to enhance the quality of family life through the purchase of goods and services that make family life easier and more enjoyable (Greenhaus &

Powell, 2006). As the quality of family life is improved, energy levels rise in the family domain, spilling back over in the work-domain and the cycle continues.

However, it is important to remember that the measure of income adequacy is not solely measuring the income derived from the participant and likewise is not restricted to the income derived from this particular job. Specifically, it is conceptualized as a household measure and includes the salary of any working individuals within the household. In addition, this measure includes any income derived from other part-time employment outside of this organization. Thus, it is important to tease apart these sources of income, and future research examining income as a resource may want to include a measure of job-specific individual income adequacy. However, we can conclude that the participant's income from this job is contributing to the reported level of income adequacy and feel confident establishing the household income adequacy as a work domain resource that contributes to positive family domain outcomes. In hindsight, a household measure of income adequacy could be tested as a predictor of both work-to-family and family-to-work positive spillover as this resource is jointly created in both the work and family domains.

With regards to family facilitating work, organizations are encouraged to understand that the family role does not necessarily hinder performance at work (conflict perspective) but it may actually benefit performance at work. Specifically, the current study found that caring for children acts as a resource that positively spills over into the work domain. The findings of Hill et al. (2007) emphasize the

energizing effects that children can provide after a long day of work. Specifically, a father recounts coming home after a very rough day of work and finding energy and renewal from his relationships with his children. This energy acts as a resource that carries him into his next day of work with a more positive attitude. This example gives insight into the family domain and views children as a social capital resource as defined by Greenhaus and Powell (2006). Specifically, this is the notion that information and/or influence derived from social capital in one role will enhance performance in another role. This idea is backed by research showing significant relationships between family support and positive career outcomes (e.g., Friedman & Greenhaus, 2000; Frone et al., 1997; Voydanoff, 2001) in addition to the significant relationship between parental status and family-to-work positive spillover resulting from the current study.

This dissertation provides a few additional implications for practice. First, the idea of introducing resources into organizations and assessing this relationship with positive spillover can be viewed as a useful method for evaluating the effects of various training interventions. For example, the introduction of a supervisor support training program would ideally increase supervisor support, acting a resource for employees. In the evaluation of the training, if supervisor support adequately predicts positive spillover, organizations can justify its presence as a resource to employees rather than just another training program gone without evaluation. A second additional implication of this study is related to the idea that there were low mean levels of several resources in this sample which may likely be the case in many work

environments. Thus, organizations must focus on the level resources (or lack of resources) in work environments in order to facilitate the desired positive outcomes. This can be achieved through organizational interventions which manipulate resources in order to achieve a desired level of positive spillover. Overall, contemporary managers should attempt to realize these benefits of combining work and family and take advantage of the possibility that participation in other roles can reenergize an employee for work, make the employee work more efficiently, provide opportunities to acquire new skills and behaviors that help them perform well at work, and can broaden their frame of reference by teaching them to put work-related problems into perspective (Van Steenbergen et al., 2007).

Future Research

The results of the current study highlight two important implications for future research as I have mentioned throughout this discussion. First, I urge future research to explore different measurement tools to examine the resources proposed in the current study. Specifically, the constructs that I proposed to operationalize the Greenhaus and Powell's (2006) resources (e.g., job control, work-family culture, physical and mental health), should be re-tested using different scales (See Table 9 for a list of suggested scales). Examples include a measure of well-being designed to capture health as a resource rather than a demand or a measure of spousal support to capture the aspect of a relationship acting as a resource. In addition to operationalizing the current study constructs, I also urge future research to explore

different constructs to operationalize the Greenhaus and Powell's (2006) resources. For example, skills and perspectives may be operationalized by tenure of length of service within the organization such that the knowledge gained from work experiences over the years may act as a resource obtained in work domain and facilitate family domain outcomes. Finally, with regards to measurement, I recommend that future research be cognizant of the nature of positive spillover being measured. The current study was measuring affective positive spillover but may have found different outcomes using a measure of instrumental spillover or enrichment (e.g., Carlson et al., 2006). The proposed study has a sound theoretical framework and I suggest that giving more thought to the measurement of the proposed relationships will provide additional significant findings.

The second major recommendation for future research is to explore these relationships in various populations. Due to the nature of the grocery industry, some of these resources may be less prevalent than in a white collar job. The resources such as decision latitude and family supportive culture which had low mean values in the current sample may be more likely to exist in occupations that offer more flexibility and support. This brings up the idea that antecedents may manifest themselves differently in various populations and future research should look into the idea that antecedents may vary depending on the population.

The current study should only be viewed as a first step toward fully understanding the construct of positive spillover and the implications for creating this

experience for employees in organizations. This study was a starting point in the identification of resources that can create positive spillover from work to home and vice versa but future research should go further to gain a better understanding of the outcomes that result from combining multiple roles and the processes that connect these antecedents and outcomes. Specifically, future research should build on the proposed study and conduct a full test of the theoretical model presented by Greenhaus and Powell (2006). By using the constructs proposed in the current study as a guide to operationalize work and family domain resources, research can test both the affective and instrumental pathways between the work and family resources and opposite role performance as well as the moderators related to role salience as proposed by Greenhaus and Powell.

Specifically, expanding on the post hoc analyses in this study, future research should test role affect as a mediator between the resources and the opposite domain performance. From the current study, we know that two of our work-domain resources are related to job satisfaction but this job satisfaction is not related to Hanson et al.'s (2006) affective measure of positive spillover. However, we do not have enough information to know if the other proposed resources elicit positive emotions within individuals and whether these positive emotions predict facilitating cross-domain effects. If we included a measure of family satisfaction as a mediator between the family domain resources and work domain performance, we could understand more about this relationship.

Although the relationships in the current study were tested longitudinally, future research should go a step further to examine these relationships using a quasi-experimental design. If I were to design a study with the goal of establishing causality among the proposed resources and positive spillover, I would use a quasi-experimental design. Specifically, I would design an experiment in which the presence or level of resources would be manipulated for two different groups of workers. Specifically, the experimental group would be exposed to a higher level of the resource than the comparison group or in the case of a dichotomous variable (e.g., relationship or parental status), the experimental group would be exposed to the resource and the control group would have no exposure to the resource. It is important to keep in mind that family characteristics would not be manipulated but participants would be chosen due to these characteristics to ensure ethical practice. I would then compare the outcomes of each group to determine whether the presence or level of the resources at time one predicted the level of positive spillover at time two.

A final suggestion for future research is to examine the antecedents of positive spillover outside of Greenhaus and Powell's (2006) suggested resources. In reference to the Broaden and Build theory of positive emotions, Fredrickson (2004) suggests that positive emotions produce optimal functioning both in the present and over time. Specifically, she discusses how individual differences such as positive affect and positive beliefs serve as resources for people coping with stress or adversity. For example, resilience is an individual difference that corresponds to optimistic and energetic approaches to life and is often related to the idea that individuals can

"bounce back from adverse or stressful situations." According to the broaden and build theory, it is suggested that psychological resilience is an enduring personal resource that broadens our score up attention and cognition, enables flexible and creative thinking, and augments peoples' enduring resources (Fredrickson, 2004). Thus, similar to the personal resources examined in the current study, future research could expand outside of Greenhaus and Powell (2006) and look at the various individual differences that emphasize positive emotions and energy and create a positive spillover between the work and family domains.

Potential Limitations

It is important to recognize the potential limitations of the proposed research in addition to the benefits suggested above. As mentioned throughout the discussion, I suggest that the major limitation of the current study is measurement related. In my discussion of each hypothesis, I have suggested measures that I believe would more accurately test the hypotheses. In addition, the breadth of the study is limited by the fact that I am only testing the antecedents of positive spillover (See Figure 2). If more resources were available, I would make a greater contribution to the literature by operationalizing and testing Greenhaus and Powell's (2006) entire theoretical model of enrichment. Specifically, I would test affect as a mediator between work, family, and personal resources and the spillover constructs in addition to testing the opposite-role productivity. Further, I am measuring the relationship with the positive spillover

construct but the study may be enhanced if I could go one step further and show a relationship to work and family domain performance.

As stated previously, grocery employment possesses characteristics that are unique to the retail industry (e.g., repetitive work, low job control, irregular work hours). Thus, the sample may also act as a limitation to the generalizability of the study findings. Further, some of the resources being tested may have a differential relationship to positive spillover in grocery workers than the same set of resources in a sample of white collar business professionals due to the differences in job and organizational characteristics (e.g., flexibility, culture, autonomy, education requirements).

Given the fact that the longitudinal model fit the data better than the cross-sectional model, it is important to point out the potential limitations associated with longitudinal and quasi-experimental research designs. With regards to the longitudinal nature of the study, a Hawthorne effect may exist. Specifically, a testing effect related to the data collection at time one may have influenced participant responses at time two as a result of the employees feeling like they are being observed or "researched" for a specific reason. In addition, given the fact that the employees in the current sample were part of a group of participants that did not receive the training intervention, social threats to internal validity could exist. For example, employees in the control stores may have found out that a training intervention was taking place at other stores resulting in the threat of diffusion or imitation of treatment. Additional

threats to validity include history which simply refers to differences in wave 2 responses due to the every day events that took place during the two waves of data collection. In addition, those individuals collecting the data differed from time one to time two which could result in instrumentation effects.

A final limitation is related to sample size of the current study. Given the fact that the sample size was just large enough to warrant adequate power (.75), the results may have been more accurate with responses from additional employees. Further, if additional variables such as job satisfaction and family satisfaction were to be included in the model, the number of estimated parameters would increase and the sample size would no longer warrant enough power.

Conclusion

The current study tested the resources proposed by Greenhaus and Powell (2006) using constructs from the work and family domains. Results showed that income adequacy acts as a work domain resource facilitating positive affective outcomes in the family domain. In addition, the presence of children under the age of 18 in the household acts as a family domain resource facilitating positive affective outcomes in the work-domain. Although many of the resources proposed in the current study were not significantly related to positive spillover, I suggest measurement and industry-related explanations and recommendations for future research examining these relationships. Overall, this research contributes to the work-family literature in several ways. This study examines the positive side of the work-

family relationship and emphasizes a focus on resources facilitating work and family rather than demands conflicting with the work and family domains. In addition, this study is one of the first to test the resources proposed by Greenhaus and Powell (2006) and provides several recommendations for testing this model going forward. Finally, the current study employed a cross-sectional and a longitudinal research design in order to learn more about the nature of the relationships between resources and positive spillover and how these relationships manifest differently across time versus concurrently. As the positive psychology and positive spillover literature is growing, there is a vast amount of opportunity to tease apart constructs and continue testing both outcomes and antecedents of this emergent concept of positive spillover. Overall, this study should serve as a starting point in the understanding of the antecedents of positive spillover and help guide decisions about measurement, sample selection, and model development in future positive spillover research.

TABLES

Table 1. Summary of fit indices for longitudinal measurement model and path model

	X^2	df	CFI	RMSEA	SRMR
Criterion level			*≥ .95*	*≤ .06*	*≤ .08*
Measurement Model	354.05*	215	.90	.06	.08
Path Model	323.07*	196	.91	.06	.06

*$p < .05$

Table 2. Summary of fit indices for cross-sectional measurement model and path model

	X^2	df	CFI	RMSEA	SRMR
Criterion level			*≥ .95*	*≤ .06*	*≤ .08*
Measurement Model	363.17*	215	.87	.07	.09
Path Model	320. 82*	196	.89	.06	.08

*$p < .05$

Table 3. Zero-Order Correlations

Variable	Correlation											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Work-Family Positive Spillover (T1)	(.82)											
2. Family-Work Positive Spillover (T1)	.50**	(.89)										
3. Work-Family Positive Spillover (T2)	.47**	.31**	(.80)									
4. Family-Work Positive Spillover (T2)	.27*	.35**	.63**	(.88)								
5. Decision Latitude	.12	.21**	.09	.08	(.74)							
6. Skill Discretion	.12	.14*	-.01	.02	.73**	(.74)						
7. Decision Authority	.09	.20**	.14*	.11	.87**	.30**	(.66)					
8. Climate for Family Concerns	.13	.08	-.03	-.05	.02	-.03	.06	(.80)				
9. Income Adequacy	.06	-.01	.03	-.06	.25**	.23**	.19**	-.01	--			
10. Level of Education	.06	-.00	-.01	-.10	.10	.05	.10	-.08	.19**	--		
11. Physical Health	-03	.05	-.04	.04	.18*	.13	.16*	.09	.12	.14	(.89)	
12. Mental Health	-.05	-.09	-.13	-.15	-.01	.02	-.04	-.03	.08	-.04	-.21**	(.86)
13. Relationship Status	.07	.02	.10	.11	.11	.00	.16*	-.04	.11	.06	-.03	-.09
14. Parental Status	.10	.27**	.13	.14*	.05	.10	-.01	-.06	-.06	.-.18*	.01	-.06
15. Job Satisfaction (T2)	.21**	.13	.12	.20**	.26**	.24**	.21**	.08	.21**	-.01	.02	.14
16. CESD	.15*	.08	.15*	.08	-.01	.01	-.06	.04	-.09	-.03	.04	-.66**
17. Control over Work Hours	.02	.08	.08	.00	.28**	.15	.41**	.11	.16*	-.06	.17	.06

Table continued on next page

Variable	13	14	15	16	17
Relationship Status	--				
Parental Status	.18*	--			
Job Satisfaction	.10	.05	(.80)		
CESD	-.05	.07	-.15*	(.83)	
Control over Work Hours	.10	.08	-.14	.12	(.64)

Note. $*p < .05$, $**p < .01$. Scale reliabilities are shown in parentheses. N = 167-199

Table 4. Means and standard deviations for all continuous variables included in model

Variable	*N*	Mean	SD
	198		
W-F Positive Spillover (T1)	198	3.88	.62
F-W Positive Spillover (T1)	198	3.89	.65
W-F Positive Spillover (T2)	198	3.86	.53
F-W Positive Spillover (T2)	198	3.92	.53
Decision Latitude	195	2.88	.43
Skill Discretion	195	2.93	.45
Decision Authority	197	2.65	.58
Climate for sharing family concerns	197	3.48	.74
Income adequacy	187	2.63	.97
Level of education	190	2.52	.78
Physical Health	196	51.42	8.18
Mental Health	196	48.59	9.89
CESD	195	2.19	2.45
Control over work hours	167	2.59	.76
Job Satisfaction (T2)	198	3.51	.63

Table 5. Frequencies for categorical variables included in model

Variable	Categories	N	Percentage
Relationship Status	Yes	108	54.5
	No	90	45.5
Parental Status	Yes	57	28.8
	No	141	71.2

Table 6. Means and standard deviations for demographic variables

Variable	*N*	Mean	SD
	198		
Age	91	31.7	17.06
Number of Children	96	1.41	1.79
Number of Children living at home	89	1.05	1.25
Store tenure	71	7.08	6.05
Days worked per week	198	4.71	.76
Hours worked per week	198	32.90	8.29

Table 7. Frequencies for demographic categorical variables

Variable	Categories	N	Percentage
Job Level	Associate	172	86.9
	Supervisor	26	13.1
Store	Store 11	25	12.6
	Store 12	18	9.1
	Store 21.	46	23.2
	Store 24	38	19.2
	Store 31	41	20.7
	Store 33	30	15.2
Relationship Status	Married	91	46.0
	Divorced	22	11.1
	Widowed	6	3.0
	Living as Married	17	8.6
	Never Married	60	30.3
Gender	Male	47	23.7
	Female	132	66.7
Education	Some high school	8	4.0
	High school	97	49.0
	Some college or associate's degree	65	32.8
	Bachelors Degree	17	8.6
	Graduate Degree	3	3.5
Income	Less than $25,000	61	30.8
	$25,000-40,000	54	27.3
	$40,000-$50,000	37	18.7
	$55,000-$70,000	30	15.2
	$80,000-$85,000	6	3.0
Ethnicity	Caucasian	133	66.8
	African American	5	2.5
	American Indian or Alaskan Native	1	.5
	Other	10	5.0

Table 8. Regression Analysis Results for the Effects of Predictors on Time 1 and Time 2 Positive Spillover using Maximum Likelihood Estimation

	Outcome Variable			
	Cross-Sectional Model		Longitudinal Model	
	WFPS (T1)	FWPS (T1)	WFPS (T2)	FWPS (T2)
Predictor	Slope (SE)	Slope (SE)	Slope (SE)	Slope (SE)
Decision Latitude	.07 *(.07)*	--	-.01 *(.08)*	--
Climate for Family Concerns	-.02 *(.04)*	--	-.01 *(.05)*	--
Income Adequacy	.04* *(.03)*	--	.05* *(.02)*	--
Physical Health	-.00 *(.00)*	.00 *(.01)*	-.00 *(.00)*	.01 *(.00)**
Mental Health	-.00 *(.00)*	-.01 *(.11)*	0.01 *(.00)*	.00 *(.00)*
Education	.02 *(.03)*	.03 *(.07)*	-.02 *(.05)*	.00 *(.05)*
Relationship Status	--	-.03 *(.05)*	--	.04 *(.06)*
Parental Status	--	.19* *(.06)*	--	.07 *(.06)*

Notes: * $p < .05$. $N = 199$.

Table 9. Measures for Future Research

Resource	Proposed Measure
Decision Latitude	Whitehall Health Survey (1989) "How often do you have a choice in deciding how you do your tasks at work?" "How often do you have a choice in deciding what tasks you do at work?"
Family Supportive Culture	Family Supportive Organizational Perceptions (Allen, 2001). **To what extent do you agree that each of the following statements represent the philosophy or beliefs of your organization:** "Work should be the primary priority in a person's life." "The way to advance in this company is to keep non-work matter out of the workplace." "It is assumed that the most productive employees are those who put their work before their family."
Skills and Perspectives	Work-Values Inventory (Meyer, Irving & Allen, 1998) **Competence and growth items** *My work:* "Requires meeting and speaking with many other people." "Make a social contribution by the work you do" "Is intellectually stimulating" "Satisfies your cultural and aesthetic interests" "Encourages continued development of knowledge and skills"
Family Support	Family Social Support (Items adapted from Etzion, 1984) **Please indicate the degree to which each of the following is present in your family life.** 1. Feedback from others? 2. Appreciation? 3. Recognition? 4. Opportunity to "take time off when in need? 5. Sharing of duties? 6. Sharing of responsibilities? 7. Emotional support? Please indicate the quality of **the** relationship you have with the following

	person or groups of persons. 8. Spouse 9. Children 10. Friends
Physical Health	Health Orientation Scale (HOS) **The items listed below refer to people's health. Please read each item carefully and decide to what extent it is characteristic of you. Give each item a rating of how much it applies to you by using the following scale:** 1 = Not at all characteristic of me. 2 = Slightly characteristic of me. 3 = Somewhat characteristic of me. 4 = Moderately characteristic of me. 5 = Very characteristic of me. Sample items include: "I am very aware of how healthy my body feels." "I feel confident about the status of my health." "I expect that my health will be excellent in the future." "I am pleased with how well and healthy I feel."
Mental Health	**The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)** "I've been feeling useful" "I've been feeling optimistic about the future" "I've been feeling good about myself"

FIGURES

Figure 1. Work and family resources modeled as predictors of the level of work-to-family and family-to-work positive spillover over time.

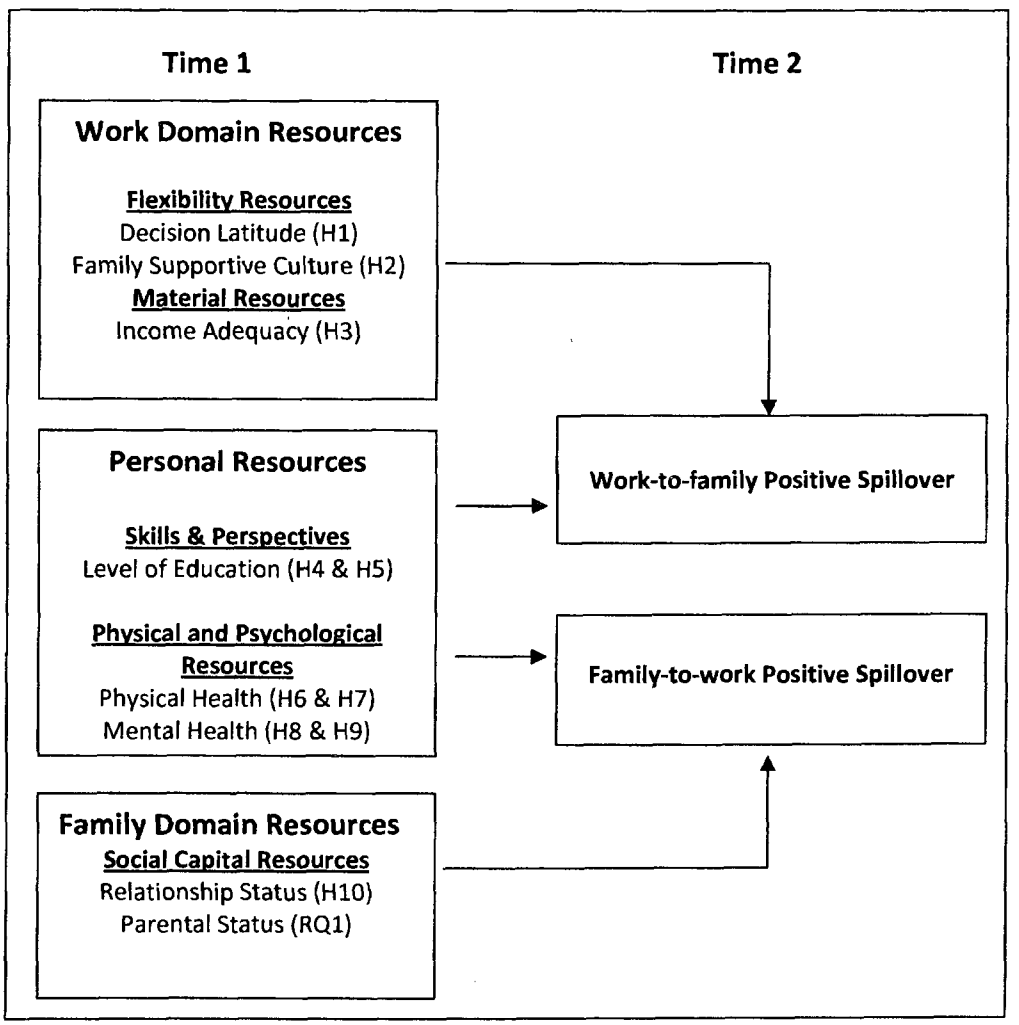


Figure 2. Bronfenbrenner's ecological systems framework with the work-family interface noted at the level of the mesosystem.

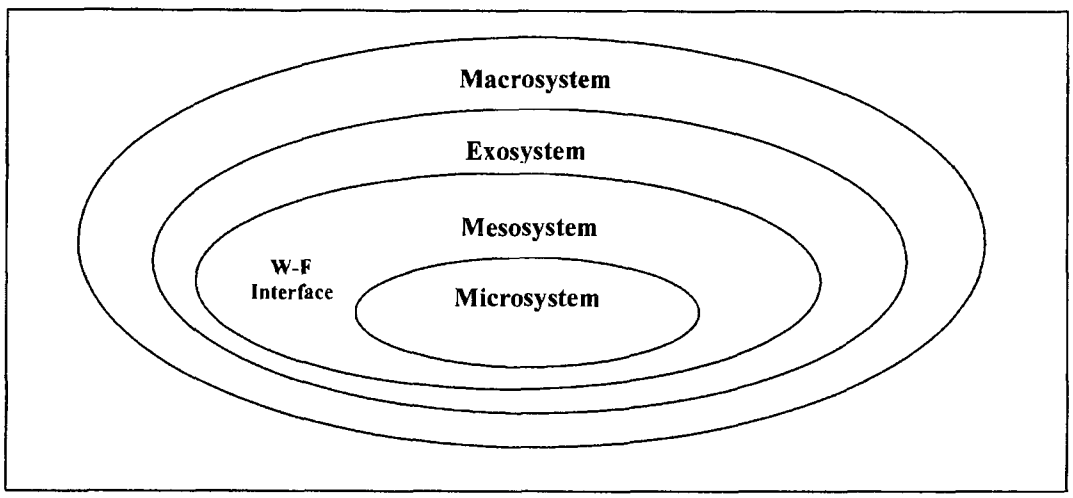


Figure 3. Voydanoff's (2007) conceptual model of within-domain and boundary-spanning demands and resources.

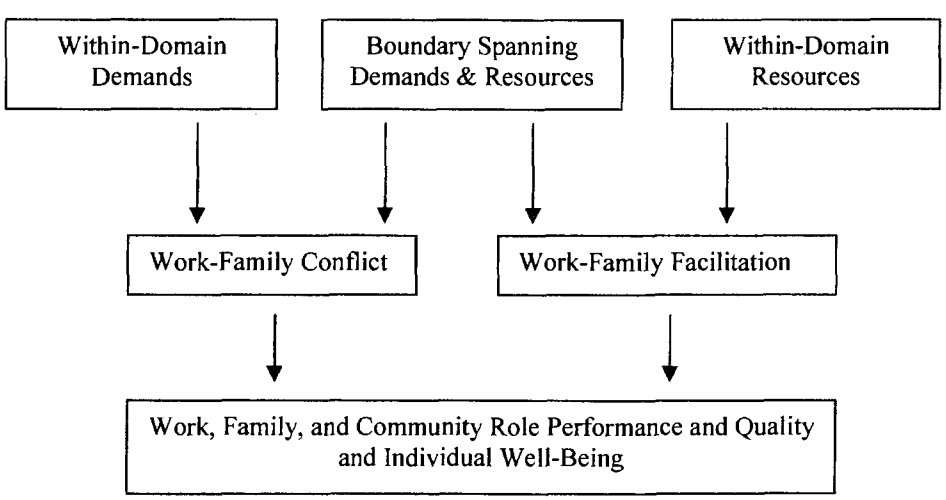


Figure 4. A model of work-family enrichment (Greenhaus & Powell, 2006).

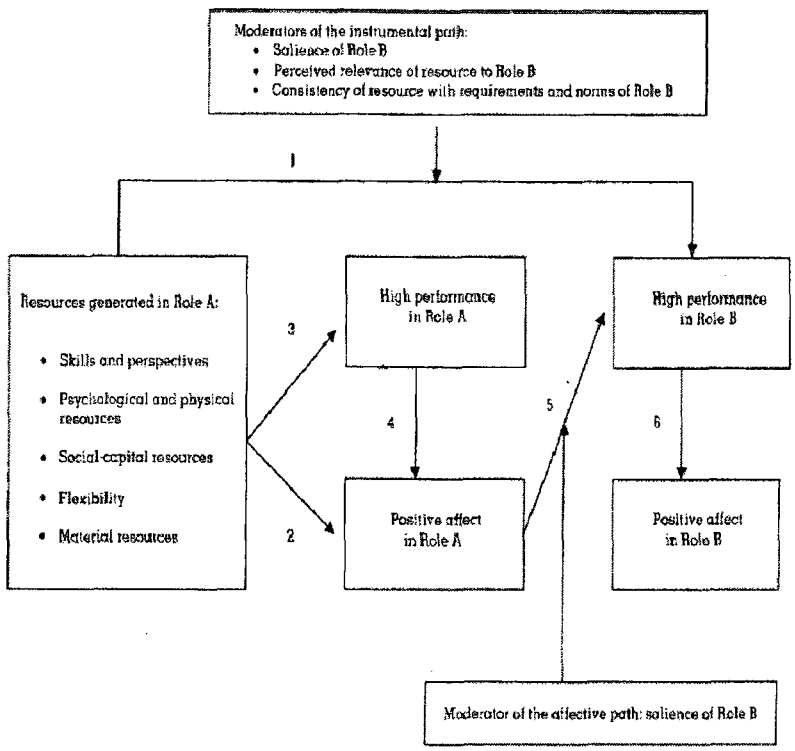


Figure 5. Proposed model to be tested using SEM

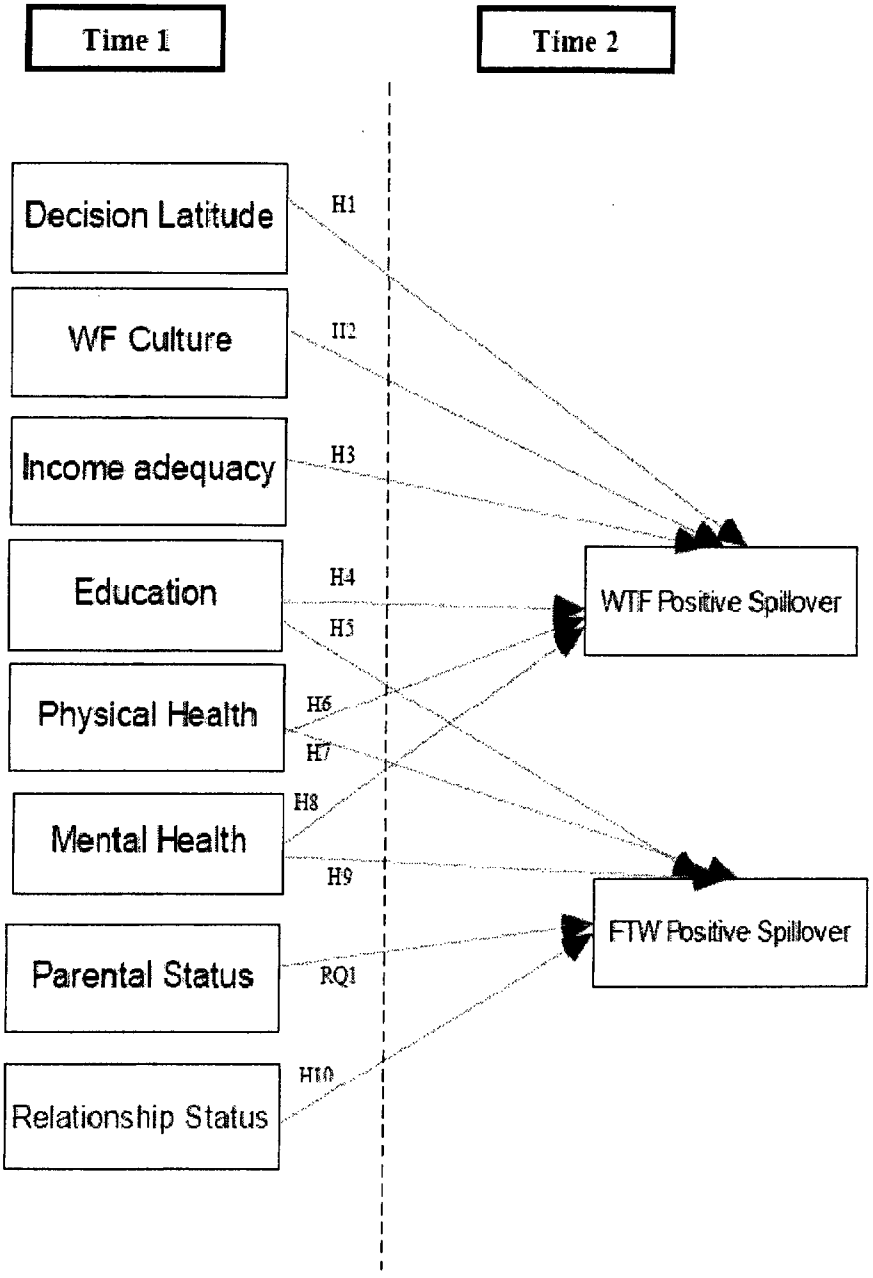


Figure 6. Longitudinal Path Model

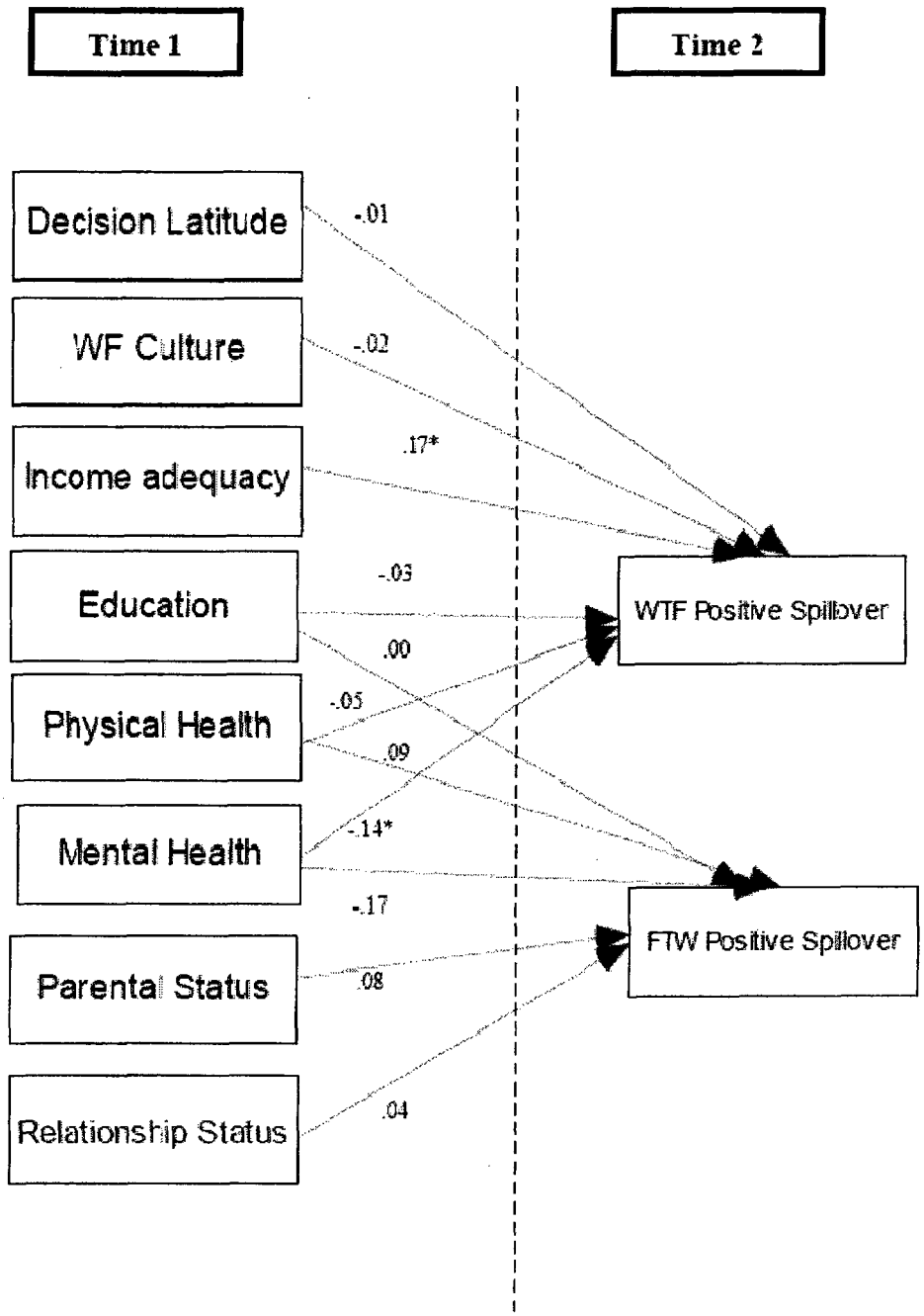
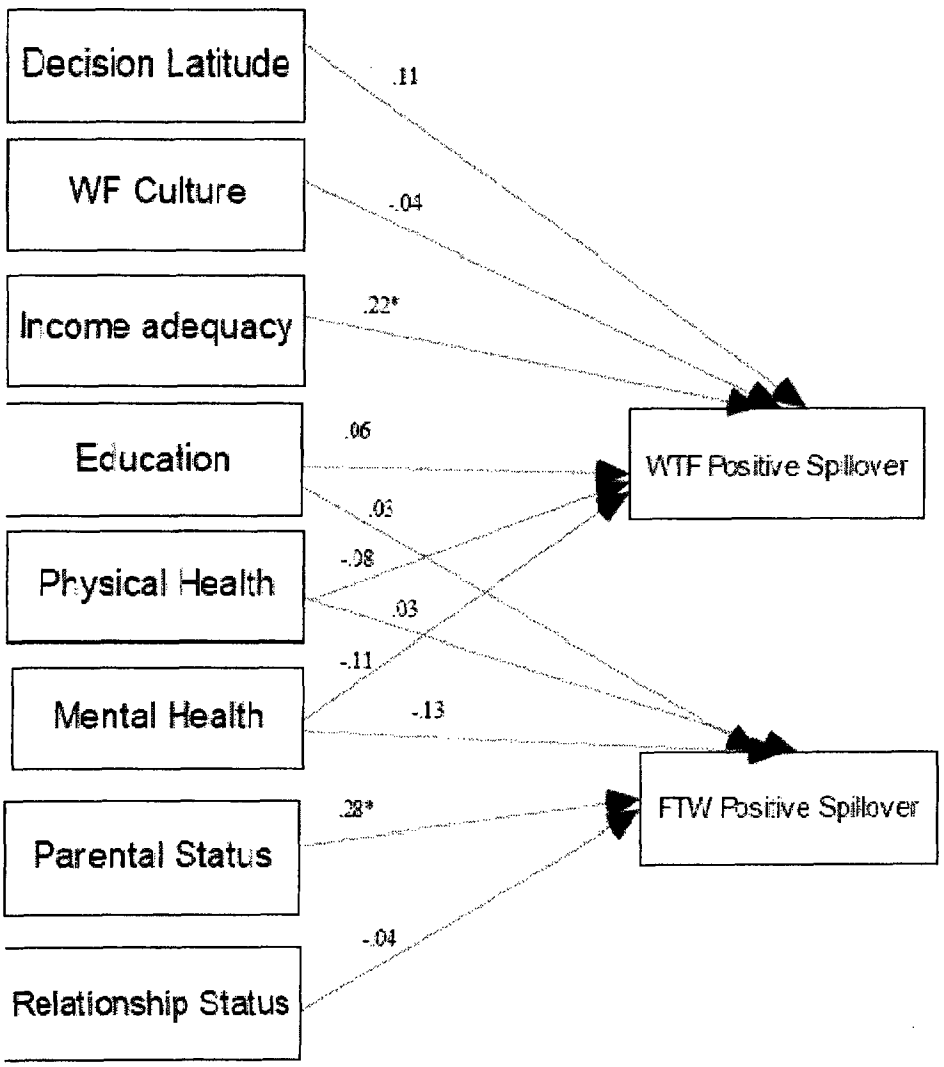


Figure 7. Cross-sectional path model



REFERENCES

Allen, T. D. (2001). Family-supportive work environments: The role of organizational perceptions. *Journal of Vocational Behavior, 58,* 414-435.

Ammons, S. K., & Kelly, E. L. (2008). Social class and the experience of work-family conflict during the transition to adulthood. *New Directions in Child and Adolescent Development, 119*, 71-84.

Anderson, S. & Sabatelli, R. (1999). Family interaction: A multigenerational developmental perspective. (2nd ed.). Needham Heights, MA: Allyn & Bacon.

Aryee, S., Srinivas, E. S., & Tan, H. H. (2005) Rhythms of life: Antecedents and outcomes of work-family balance among employed parents. *Journal of Applied Psychology, 90*, 132-146.

Balmforth, K. & Gardner, D. (2006). Conflict and facilitation between work and family: realizing the outcomes for organizations, *New Zealand Journal of Psychology, 35*, 69–76.

Barnett, R. C., & Hyde, J. S. (2001). Women, men, work and family: An expansionist theory. *The American Psychologist, 56*(10), 781-796.

Barnett, R.C., (1994). Home-to-work spillover revisited. A study of full-time employed women in dual-earner couples. *Journal of Marriage and Family, 56,* 1.

Barnett, R. (1998). Toward a review and reconceptualization of the work/family literature. *Genetic, Social, and General Psychology Monographs, 124*,125 - 183.

Belkic, K., Schnall, P., & Ugljesic, M. (2000). Cardiovascular evaluation of the worker and workplace: A practical guide for clinicians. *Occupational Medicine, 15*, 213-222.

Berry, J. O., & Rao, J. M. (1997). Balancing employment and fatherhood: A systems perspective. *Journal of Family Issues, 18,* 386-402.

Blank, R.M. (1988). Women's paid work, household income, and household well being. In S. Rix (Ed.), *The American women 1988-1989*. New York: Norton.

Bollen, K. A. (1989). *Structural equations with latent variables.* New York, Wiley.

Brief, A., Butcher, A., George, J., & Link, K. (1993). Integrating bottom-up and top-down theories of subjective well-being: The case of health. *Journal of Personality and Social Psychology, 64*, 646-653.

Broadbridge, A. (1999). Retail managers: stress and the work-family relationship. *International Journal of Retail and Distribution Management, 27,* 374-383.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513-530.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22, 723-742.

Bronfenbrenner, U., McClelland, P., Wethington, E., & Moen, P. (1996). *The state of Americans: This generation and the next.* New York: Free Press.

Bureau of Labor Statistics (BLS). (2008). *Career guide to industries: grocery stores.* Retrieved January 25, 2009, from http:// www.bls.gov/oco/cg/cgs024.html.

Byron, D. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior, 67*, 169-198.

Carlson, D.S., Kacmar, K.M., Wayne, J.H., & Grzywacz, J.G. (2006). Measuring the positive side of the work-family interface: Development and validation of a work family enrichment scale. *Journal of Vocational Behaivor, 68,* 131-164.

Chapman, N. J., Ingersoll-Dayton, B., & Neal, M. B. (1994). Balancing the multiple roles of work and caregiving for children, adults, and elders. In C. P. Keita & J. J. Hurrel, Jr. (Eds.). *Job stress in a changing workforce* (pp. 283-300). Washington D C: American Psychological Association.

Collijn, D. H., Appels, A., & Nijuis, F. (1996). Are multiple roles a risk factor for myocardial infarction for women? *Journal of Psychosomatic Research, 40,* 271-279.

Conger, R., Ge, X., Elder Jr, G., Lorenz, F., & Simons, R. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child Development, 65*, 541-561.

Crosby, F. J. (1991*) Juggling: The unexpected advantages of balancing career and home for women and their families.* New York: Free Press.

Crouter, A. C. (1984). Spillover from family to work: The neglected side of the work-family interface. *Human Relations, 37(6)*, 425-442.

De Jonge, J., & Dormann, C. (2006). Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. *Journal of Applied Psychology, 91,* 1359-1374.

Diener, E., Sapyta, J., & Suh, E. (1998). Subjective well-being is essential to well-being. *Psychological Inquiry, 9*, 33-37.

Edwards, J., R., & Rothbard, N., P. (2000). Mechanisms linking work and family: Specifying the relationships between work and family constructs. *Academy of Management Review, 25*, 178-199.

Emmons, R., & Diener, E. (1985). Personality correlates of subjective well-being. *Personality and Social Psychology Bulletin, 11*, 89-101.

Etzion, D. (1984). Moderating effects of social support on the stress burnout relationship. *Journal of Applied Psychology, 69*, 615-622.

Fredrickson, B. L., Mancuso, R. A., Branigan, C., & Tugade, M. M. (2000). The undoing effect of positive emotions. *Motivation and Emotion, 24,* 237–258.

Fredrickson, B.L. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *American Psychologist, 56,* 218–226.

Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Phil. Trans. R. Soc. Lond. B, 359,* 1367–1377.

Friedman, S. D., & Greenhaus, J. H. (2000). *Work and family-allies or enemies? What happens when business professionals confront life choices.* New York: Oxford University Press.

Frone, M.R., Russell, M., & Cooper, M.L. (1992). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. *Journal of Applied Psychology, 77,* 65-78.

Frone, M. R., Russell, M., & Cooper, M. L. (1997). Relation of work-family conflict to health outcomes: A four-year longitudinal study of employed parents. *Journal of Occupational and Organizational Psychology, 70,* 325-335.

Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior, 50,* 145-167.

Frone, M. R. (2003). Work-family balance. In J. C. Quick & L. E.Tetrick (Eds), *Handbook of occupational health psychology* (pp. 143-162). Washington, DC: American Psychological Association.

Gable, S., & Haidt, J. (2005). Positive psychology. *Review of General Psychology, 9,* 1089-2680.

Gallup Research Institute (2008). *Employee engagement: The employee side of the human sigma equation.* Retrieved November 5, 2008, from http://www.gallup.com/consulting/52/Employee-Engagement.aspx.

Glenn, N. D. (1990). The social and cultural meaning of contemporary marriage. In B. Christiensen (Ed.), *The Retreat from Marriage* (pp. 33-54), Rockford, IL: Rockford Institute.

Goode, W. J. (1960). A theory of role strain. *American Sociological Review, 25,* 483-496.

Grandey, A. A. (2003). When "The show must go on": Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal, 46,* 86-97.

Greenhaus, J. H. & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10,* 76-88.

Greenhaus, J. H., & Powell, G. N. 2006. When work and family are allies: A theory of work-family enrichment. *Academy of Management Review, 31*, 72-92.

Greenhaus, J. H.,Allen, T. D., & Spector, P. E. (2006). Health consequences of work-family conflict: The dark side of the work-family interface. In P. L. Perrewe & D. C. Ganster (Eds). *Research in occupational stress and well being.* JAI Press/Elsevier.

Grzywacz, J.G. (2000). Work-family spillover and health during midlife: Is managing conflict everything? *American Journal of Health Promotion, 14,* 236-243.

Grzywacz, J.G. (2002). *Toward a theory of work-family facilitation.* Paper presented at the 34th Annual Theory Construction and Research Methodology Workshop, Houston, TX.

Grzywacz, J. G., & Marks, N. F. (2000a). Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology, 5,* 111-126.

Grzywacz, J. G., & Marks, N. F. (2000b). Family, work, work-family spillover and problem drinking during midlife. *Journal of Marriage and the Family, 62,* 336-348.

Grzywacz, J. G., & Bass, B. L. (2003). Work, family, and mental health: Testing different models of work-family fit. *Journal of Marriage and Family, 65*, 248-262.

Grzywacz, J. G., Quandt, S. A., Arcury, T. A., & Marín, A. (2005). The work-family challenge and mental health: Experiences of Mexican immigrants. *Community, Work & Family, 8*, 271-279.

Hammer, L., Allen, E., & Grigsby, T. (1997). Work-family conflict in dual-earner couples: Within-individual and crossover effects of work and family. *Journal of Vocational Behavior, 50,* 185-203.

Hammer, L. B., Neal, M. B., Newsom, J., Brockwood, K. J., & Colton, C. (2005). A longitudinal study of the effects of dual-earner couples' utilization of family-friendly workplace supports on work and family outcomes. *Journal of Applied Psychology, 90,* 799-910.

Hammer, L. B., Cullen, J. C., Neal, M. B., Shafiro, M. M., & Sinclair, R. R. (2005a). The Effects of Work-Family Fit on Depression: A Longitudinal Study. *Journal of Occupational Health Psychology, 10,* 138-154.

Hanson,G., Hammer, L. B., & Colton, C. (2006). Development and validation of a multidimensional scale of work-family positive spillover. *Journal of Occupational Health Psychology, 11,* 249-265.

Hammer, L.B., & Zimmerman, K. L. (forthcoming). Quality of Work Life. In S. Zedeck (Ed.), *Handbook of I/O Psychology. Vol. 3.*

Hill, E. J., Allen, S., Jacob, J. I., Bair, A. F., Bikhazi, S. L., Van Langeveld, A., Martinengo, G., Palmer, T.T., & Walker, E. (2007). Work-family facilitation: Generating theory using a qualitative assessment. *Advances in Developing Human Resources, 9,* 507-526.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44,* 513-524.

Hobfoll, S. E., & Shirom, A. (1993), Stress and burnout in the workplace, in Golembiewski, R.T. (Eds),*Handbook of organizational behavior*, 41-60, Marcel Dekker; New York.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1-55.

Ingersoll-Dayton, B., Neal, M. B., & Hammer, L. B. (2001). Aging parents helping adult children: The experience of the sandwiched generation. *Family Relations: Interdisciplinary Journal of Applied Family Studies, 50,* 263 - 271.

Jacobs, J. A., & Gerson, K. (2001). Overworked individuals or overworked families?: Explaining trends in work, leisure, and family time. *Work and Occupations, 28,* 40-63.

Kagan, C., Lewis, S., & Heaton, P. (1998). *Caring to work: Accounts of working parents of disabled children.* London: Family Policy Studies Centre/Joseph Rowntree Foundation.

Kahn, R. L., Wolfe, D. M., Quinn, R., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational Stress.* New York: Wiley.

Karasek, R. (1979). Job demands, job decision latitude and mental strain: Implications for job redesign. *Administrative Science Quarterly, 24,* 285-306.

Karasek, R. & Theorell, T. (1990). *Healthy work: Stress, productivity and the reconstruction of working life.* New York: Basic Books.

Katz, D. & Kahn, R. (1978). *The social psychology of organizations* (2nd Ed.). New York: John Wiley & Sons.

Kinnunen, U., & Mauno, S. (1998). Antecedents and outcomes of work-family conflict among employed women and men in Finland. *Human Relations 51,* 157-177.

Kinnunen, U., Feldt, T., Geurts, S., & Pulkkinen, L. (2006). Types of work-family interface: Well-being correlates of negative and positive spillover between work and family. *Scandinavian Journal of Psychology, 47,* 149-162.

Kirchmeyer, C. (1992). Perceptions of nonwork-to-work spillover: Challenging the common view of conflict-ridden relationships. *Basic and Applied Social Psychology, 13,* 231-249.

Kirchmeyer, C. (1993). Nonwork-to-work spillover: A more balanced view of the experiences and coping of professional women and men. *Sex Roles, 28,* 531-552.

Kossek. E. E., & Ozeki, C. (1998). Work- family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior/human resources research. *Journal of Applied Psychology, 83,* 139-149.

Kossek, E., Colquitt, J.A., & Noe, R.A. (2001). Care giving decisions, well-being, and performance: The effects of place and provider as a function of dependent type and work-family climates. *Academy of Management Journal, 44,* 29-44.

Lambert, E. G., Hogan, N. L., & Barton, S. M. (2004). The nature of work-family conflict among correctional staff: An exploratory examination. *Criminal Justice Review, 29,* 145-172.

Lehman, A.F., 1988. A quality of life interview for the chronically mentally ill. *Evaluation Program Planning 11*, 51–62.

Lobel, S., & Kossek, E., (1996). Human resource strategies to support diversity in work and personal lifestyles: Beyond the 'family-friendly' organization. In

Kossek, E., & Lobel, S. (Eds.) *Managing diversity: Human resource strategies for transforming the workplace*. (pgs. 221-244). Cambridge, MA: Blackwell Publishers.

Marks, S. R. (1977). Multiple roles and role strain: Some notes on human energy, time, and commitment. *American Sociological Review, 42,* 921-936.

Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behavior, 70,* 149-171.

Meyer, J. P., Irving, G. P., & Allen, N. J. (1998). Test of the moderating effect of work values on the relations between early work experiences and organizational commitment. *Journal of Organizational Behavior, 19*, 29-52.

Muthén, L. K., & Muthén, B. O. (2005). Mplus user's guide [Computer software and manual], (3rd Ed.). Los Angeles.

Neal, M.B., & Hammer, L.B. (2007). Working couples caring for children and aging parents: Effects on work and well-Being. Mahwah, NJ: Lawrence Erlbaum Associates.

Neal, M. B., Chapman, N. J., Ingersoll-Dayton, B., & Emlen, A. C. (1993). *Balancing work and caregiving for children, adults, and elders.* Newbury Park, CA: Sage.

Noor, N. M. (2003). Work-and family-related variables, work-family conflict and women's well-being: some observations, *Community, Work and Family, 6,* 297-319.

Olivius, G., Ostergren, P., Hanson, B., & Lyttkens, C. (2004). Parental economic stress: Evidence of an overlooked public health risk among Swedish families. *The European Journal of Public Health, 14*, 354-376.

Palmer, B., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences, 33*, 1091-1100.

Parasuraman, S., & Greenhaus, J. H. (1997). The changing world of work and family. In S. Parasuraman & J. H. Greenhaus (Eds.), *Integrating work and family: Challenges and choices for a changing world* (pp. 3-14). Westport: Praeger.

Pietromonaco, P. R., Manis, J., & Frohardt-Lane, K. (1986). Psychological consequences of multiple social roles. *Psychology of Women Quarterly, 10,* 373-382.

Piotrkowski, C. S. (1979). Work and the family system: A naturalistic study of working class and lower-middle-class families. New York: The Free Press.

Podsakoff, P.M., MacKenzie, S.M., Lee, J., & Podsakoff, N.P. (2003). Common method variance in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 879-903.

Radloff, L.S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* 385-401.

Repetti, R. L., Matthews, K. A., & Waldron, I. (1989). Employment and women's health: Effects of paid employment on women's mental and physical health. *American Psychologist, 44,* 1394-1401.

Robinson, J. P., & Godbey, G. (1997). *Time for life. The surprising ways Americans use their time.* University Park: Pennsylvania State University Press.

Rosenzweig, J. L., & Brennan, E. M. (2008). Work, life, and the mental health system of care: A guide for professionals supporting families of children with emotional or behavioral disorders. Towson, MD: Paul E, Brookes Publishing.

Rosenzweig, J. M., Brennan, E. M., & Ogilvie, A. M. (2002). Work-family fit: Voices of parents of children with emotional and behavioral disorders. *Social Work, 47,* 415-424.

Ross, C.E., & Huber, J. (1985). Hardship and depression. *Journal of Health and Social Behavior, 26,* 312-327.

Schaufeli, W.B., & Bakker, A.B. (2004). Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25,* 293–315.

Schor, J. (1991). *The overworked American.* New York: Basic Books.

Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55,* 5-14.

Sieber, S. D. (1974). Toward a theory of role accumulation. *American Sociological Review, 39,* 467-478.

Sinclair, R., Martin, J. E., & Michel, R. P. (1999). Full-time and part-time subgroup differences in job attitudes and demographic characteristics. *Journal of Vocational Behavior, 55,* 337-357.

Snell, W. E. (1997). *The health orientation scale.* Department of Psychology, SE Missouri State University.

Staines, G. L. (1980). Spillover versus compensation: A review of the literature on the relationship between work and non-work. *Human Relations, 33,* 111-129.

Staw, B. M., Sutton, R. I., Pelled, L. H. (1994) Employee positive emotion and favorable outcomes at the workplace. *Organization Science, 5,* 51-71.

Stoddard, M., Madsen, S.R. (2007). Toward an understanding of the link between work-family enrichment and individual health. *Journal of Behavioral and Applied Management, 9,* 2-15.

Tanaka, J.S., & Huba, G.J. (1989). A general coefficient of determination for covariance structure models under arbitrary GLS estimation. *British Journal of Mathematical and Statistical Psychology, 42,* 233-239.

Tennant, R., Hiller, L., Fishwish, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J. Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-

Being Scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes, 63,* 1-13.

Theorell, T. (2003). To be able to exert control over one's own situation: A necessary condition for coping with stressors. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 201-220). Washington, D C: American Psychological Association.

Thoits, P. A. (1983). Multiple identities and psychological well-being: A reformulation and test of the social isolation hypothesis. *American Sociological Review, 48,* 147-187.

Thompson, C. A., Beauvis, L. L., & Lyness, K. S. (1999). When work-family benefits are not enough: The influence of work-family culture on benefit utilization, organizational attachment, and work-family conflict. *Journal of Vocational*

Thompson, C. A., & Prottas, D. J. (2006). Relationships among organizational family support, job autonomy, perceived control, and employee well-being. *Journal of Occupational Health Psychology, 11*, 100-118.

Ullman, J. B. (1996). Structural equation modeling. In B. G. Tabachnik & L. S. Fidell *Using Multivariate Statistics (3rd Ed.)* pp. 709-812. Northridge, CA: Harper Collins College Publishers.

Van Steenbergen, E. F., Ellemers, N., & Mooijaart, A. (2007). How work and family can facilitate each other: distinct types of work-family facilitation and

outcomes for women and men. *Journal of Occupational Health Psychology, 12* 279-300.

Veal, A .J. (2004). A brief history of work and its relationship to leisure. In J .T. Haworth & A .J. Veal (Eds.), *Work and leisure* (pp. 15-33). New York: Routledge.

Voydanoff, P. (2002). Linkages between the work-family interface and work, family, and individual outcomes: *An integrative model. Journal of Family Issues, 23,* 138-164.

Voydanoff, P. (2004). Work, community, and parenting resources and demands as predictors of adolescent problems and grades. *Journal of Adolescent Research, 19,* 155-173.

Voydanoff, P. (2005). Work demands and work-to-family and family-to-work conflict. *Journal of Family Issues, 26,* 707-726.

Voydanoff, P. (2007). *Work, family, and community: Exploring interconnections.* Mahwah, NJ: Lawrence Erlbaum Associates.

Warr, P. B. (1999). Well-being and the workplace. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 392-412), New York: Russell Sage Foundation.

Ware, J. E., Kosinski, M. & Keller, S. D. (1996). A 12-item short-form health survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care, 34,* 220-244.

Wayne, J. H., Grzywacz, J. G., Carlson, D. S., & Kacmar, K. M. (2004, May). Defining work-family faciliation: A construct reflecting the positive side of the work-family interface. Paper presented at the 19th Annual Conference of the Society of Industrial/Organizational Psychology. Chicago, IL.

Wayne, J. H., Musisca, N., & Fleeson, W. (2004). Considering the role of personality in the work-family experience: Relationships of the big five to work-family conflict and facilitation. Journal of Vocational Behavior, 64, 108-130.

Wayne, A. Randell & J. Stevens, J. (2006). The role of identity and work–family support in work–family enrichment and its work-related consequences, *Journal of Vocational Behavior 69*, 445–461.

Wayne, J. H., Grzywacz, J. G., Carlson, D. S. & Kacmar, K. M. (2007). Work family facilitation: a theoretical explanation and model of primary antecedents and consequences. *Human Resource Management*, *17*, 63-76.

Werbel, J. & Walter, M. H. (2002). Changing views of work and family roles: A symbiotic perspective, *Human Resource Management Review, 12,* 293–298.

Westman, M., Etzion, D., & Danon, E. (2001). Job insecurity and crossover of burnout in married couples. *Journal of Organizational Behavior*, *22*, 467-481.

Wetzels, M., de Ruyter, K., & Bloemer, J. (2000). Antecedents and consequences of role stress of retail sales persons. *Journal of Retailing and Customer Services, 7,* 65-75.

White, L., & Rogers, S.J. (2000). Economic circumstances and family cutcomes: A review of the 1990s. *Journal of Marriage and the Family 62,* 1035-1052.

Whitehall Health Survey. (1989). London: University College of London, Department of Community Medicine, Civil Service Occupational Health Service (Version S2).

Williams, A., Franche, R., Ibrahim, S., Mustard, C. A., & Layton, F. R. (2006). Examining the relationship between work-family spillover and sleep quality. *Journal of Occupational Health Psychology 11,* 27-37.

Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology, 83,* 486-493.

Yogev, S. (1981). Do professional women have egalitarian marital relationships? *Journal of Marriage and the Family, 43,* 865-871.

Appendix A

Positive Spillover Studies

Study	Title	Resource (if applicable)
General studies of Positive Spillover		
Sieber (1974)	Toward a theory of role accumulation.	
Marks (1977)	Multiple roles and role strain: Some notes on human energy, time, and commitment	
Stains (1980)	Spillover versus compensation: A review of the literature on the relationship between work and non-work.	
Crouter (1984)	Spillover from family to work: The neglected side of the work family interface.	
Kirchmeyer (1992a)	Nonwork participation and work attitudes: A test of scarcity vs. expansion models of personal resources.	
Kirchmeyer (1992b)	Perceptions of nonwork-to-work spillover: Challenging the common view of conflict-ridden domain relationships.	
Kirchmeyer (1993)	Nonwork to work spillover: A more balanced view of the experiences and coping of professional women and men.	
Stephens, Franks, & Atienza (1997)	Where two roles intersect: Spillover between parent care and employment.	
Edwards & Rothbard (2000)	Mechanisms Linking work and family: clarifying the relationship between work and family constructs.	
Grzywacz (2000)	Work-family spillover and health during midlife: Is managing conflict everything?	
Grzywacz (2002)	Toward a theory of work-family facilitation	
Van Steenbergen, Ellemers, & Mooijaart (2007)	How work and family can facilitate each other: Distinct types of work-family facilitation and outcomes for women and men.	

Voydanoff (2004)	The effects of work demands and resources on work-to-family conflict and facilitation	
Flexibility Resources:		
Grzywacz & Marks (2000a)	Family, work, work-family spillover, and problem drinking during midlife.	Decision latitude, coworker & supervisor support
Grzywacz & Butler (2005)	The impact of job characteristics on work-to-family facilitation: Testing a theory and distinguishing a construct	Job autonomy, variety, complexity and social skill
Wayne, Randel & Stevens (2006)	The role of identity and work-family support in work-family enrichment and its work-related consequences.	Formal & informal support for family
Wayne, Grzywacz, Carlson & Kacmar (2007)	Work-family facilitation: A theoretical model of primary antecedents and consequences.	Coworker & supervisor Support, family supportive culture
Material Resources:		
Hill, Allen, Jacob, Bair, Bikhazi et al. (2007)	Work Family Facilitation: Expanding Theoretical Understanding Through Qualitative Exploration.	Material well being (salary, benefit, compensation) physical and psychology health
Social Capital Resources:		
Grzywacz & Marks (2000b)	Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family.	Affectual spouse support
Aryee, Srivivas, & Tan (2005)	Rhythms of Life: Antecedents and Outcomes of Work-Family Balance in Employed Parents	Family support

Hill, Allen, Jacob, Bair, Bikhazi et al. (2007)	Work Family Facilitation: Expanding Theoretical Understanding Through Qualitative Exploration.	Interactions with family members) physical and psychological health
Physical and Psychological Resources:		
Barnett & Hyde (2001)	Women, men, work and family: An expansionist theory.	Mental & Physical Health
Grzywacz & Bass (2003)	Work, family, and mental health: Testing different models of work—family fit.	Mental illness/depression
Hanson, Hammer, Colton, 2006	Development and validation of a multidimensional scale of work-family positive spillover.	Mental health
Stoddard (2007)	Toward an understanding of the link between work-family enrichment and individual health.	Overall health Mental health
Hill (2005)	Work-family facilitation and conflict, working fathers and mothers, work-family stresses and support.	Physical health Mental health
Hammer, Cullen, Neal, Sinclair, & Shafiro (2005)	The longitudinal effects of work-family conflict and positive spillover on depressive symptoms among dual-earner couples.	Spouse depression

Appendix B

Survey items measured at time 1

Items measured at Time 1
Decision Latitude **Skill Discretion:** 1. My job requires that I learn new things 2. I have an opportunity to develop my own special abilities. 3. My job requires a high level of skill 4. I get to do a variety of things on my job. 5. My job requires a lot of repetitive work (R) 6. My job requires me to be creative **Decision Authority:** 1. My job allows me to make a lot of decisions on my own. 2. On my job, I am given a lot of freedom to decide how I do my work. *Response Options: (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)*
Climate for sharing family concerns "In my company, it is generally accepted that people..." 1. Might share concerns about their family. 2. Can talk about family problems 3. Can get advice on how to deal with family issues *Response Options: (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)*
Income Adequacy Which of the following describes your ability to get along on your income: 1 = We just can't make ends meet 2 = We have just enough, no more 3 = We have enough, with a little extra 4 = We always have money left over
Education What is the highest level of education that you have completed? 1 = Some high school 2 = High school diploma or GED 3 = Some college or associates degree 4 = Bachelor's Degree 5 = Graduate Degree.

Relationship Status

What is your relationship status?
-1 = Not Married
1 = Married or living as married

Parental Status

What are the ages of your children living at home?

If response ≥ 18 OR no children, then parstat = 0 (no children)
If response < 18, then parstat = 1 (Children)

Physical & Mental Health

1. In general, how would you say your health is? (*Poor, fair, good, very good, excellent*)

2. The follow questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?
   a. Moderate activities
   b. Climbing several flights of stairs

   (*3 = Yes, limited a lot, 2 = Yes, limited a little, 1 – No, not limited at all*)

3. During the past 4 weeks, how much of the time have you had any of the following problems as a result of your physical health?
   a. Accomplished less than you would like.
   b. Were limited in the kind of work or other activities?

   (*1 = None of the time, 2 = a little of the time, 3 = Some of the time, 4 = Most of the time, 5 = All of the time*)

4. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?
   (*1 = Extremely, 2 = Quite a bit, 3 = Moderately, 4 = A little bit, 5 = Not at all*)

5. During the past 4 weeks, how much of the time have you had any of the following problems with your work or any other regular daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?
   a. Accomplished less than you would like
   b. Did work or other activities less carefully than usual?

6. How much of the time during the past 4 weeks…
   a. Have you felt calm and peaceful?
   b. Did you have a lot of energy?
   c. Have you felt downhearted and depressed?

7. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your

social activities (like visiting friends, relatives, etc.)?

Response Options for 5, 6, and 7: (*1= None of the time, 2 = a little of the time, 3 = Some of the time, 4 = Most of the time, 5 = All of the time*)

Items measured at Time 2

Positive Spillover

Work-to-Family:

1. When things are going well at work, my outlook regarding my family life is improved.
2. Being in a positive mood at work helps me to be in a positive mood at home.
3. Being happy at work improves my spirits at home.
4. Having a good day at work allows me to be optimistic with my family.

Family-to-Work:

1. When things are going well in my family, my outlook regarding my job is improved.
2. Being in a positive mood at home helps me to be in a positive mood at work.
3. Being happy at home improves my spirits at work.
4. Having a good day with my family allows me to be optimistic at work.

Response Options: (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)