

The work-eldercare interface: Workplace characteristics, work-family conflict, and well-being among caregivers of older adults

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BOSTON COLLEGE
Graduate School of Social Work

THE WORK-ELDERCARE INTERFACE: WORKPLACE CHARACTERISTICS,
WORK-FAMILY CONFLICT, AND WELL-BEING AMONG CAREGIVERS OF OLDER
ADULTS

A dissertation
by

MELISSA D. BROWN

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of the requirements for the degree of
Doctor of Philosophy

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**THE WORK-ELDERCARE INTERFACE: WORKPLACE CHARACTERISTICS,
WORK-FAMILY CONFLICT, AND WELL-BEING AMONG FAMILY
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Dissertation Chair: Dr. Marcie Pitt-Catsoupes

Abstract

The majority of family caregivers of older adults are also working for pay, and many experience work-family role conflict in managing both work and caregiving responsibilities. Work-family role conflict is associated with poorer psychological and physical health, which interferes with their ability to provide optimal care. Informed by role theory, this dissertation uses a randomized national sample of caregivers of older adults (N=465) to address the relationships between workplace characteristics, workplace flexibility, work-family role conflict, and caregiver stress. While much research has explored the work-family interface, there have been fewer investigations of the workplace characteristics associated with work-family role conflict exclusively among caregivers of older adults. Additionally, the few studies exploring the relationship between workplace flexibility and stress among caregivers of older adults have yielded inconsistent findings. Results indicate that workplace characteristics associated with work-family role conflict among caregivers of older adults include supervisor support, work overload, work hours, and perceptions of a family-supportive work environment. A

significant interaction effect between caregiving frequency (weekly vs. intermittent) indicates that while workplace flexibility is associated with decreased work-family conflict among those providing care intermittently, this association is not found for those providing care on a regular, weekly basis. A second set of analyses limited to regular, weekly caregivers (N=211) finds that work-family role conflict mediates the relationship between workplace flexibility and caregiver stress. This suggests that workplace flexibility may only benefit caregivers when work-family conflict is mitigated or reduced. Workplace flexibility is not associated with stress among caregivers in fair or poor health; caregivers struggling with their own health issues may need additional support to manage work and family demands. These findings can inform the efforts of policymakers and practitioners working to promote the well-being of family caregivers of older adults.

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Chapter One: Introduction

Purpose and Specific Aims

As the number of Americans age 65-plus will nearly double over the next twenty years, a majority of workers will provide care to an elder relative at some point during their tenure in the workforce (Administration on Aging, 2010). In a 2008 survey of the U.S. workforce, over 40 percent of workers reported having provided care to a relative aged 65 or older within the past five years (Aumann, Galinsky, Sakai, Brown, & Bond, 2010). Unfortunately, the experiences of today's caregivers who are also working for pay make this a foreboding statistic. Workers who provide care for an older relative or friend report significantly poorer physical and mental health than their workforce counterparts without this responsibility (Burton, Chen, Conti, Pransky, & Edington, 2004; Greenberg, Seltzer, & Brewer, 2006; Metlife Study of Working Caregivers and Employer Health Costs, 2010; Pinquart, & Sorensen, 2003; Scott, Hwang, & Rogers, 2006).

It is vital that caregivers who are also working for pay remain well enough to fulfill both work and caregiving responsibilities. The contributions of family caregivers—the majority of whom also work for pay (National Alliance of Caregiving & AARP, 2009)—are enormous. Family caregivers provide more than 80 percent of the care older adults receive; if paid, their services would cost well over three billion dollars annually (National Alliance for Caregiving and Evercare, 2009). Yet, if caregivers are not well themselves, they are unable to provide optimal care (Beach, Schulz, Williamson, Miller, Weiner, & Lance, 2005).

Researchers have posited that increased work-family role conflict (difficulty in meeting both work and caregiving responsibilities) is to blame for the disparities in well-

being between employees caring for an older adult and those not involved in eldercare (Martire & Stephens, 2003). Studies have shown that levels of work-family role conflict are higher among employees caring for an older adult than compared to those not involved in eldercare (Chapman, Ingersoll-Dayton, & Neal, 1994; Frye & Breugh, 2004, Marks, 1998). While a large number of studies have explored the workplace characteristics associated with work-family role conflict, few have focused solely on employees caring for older adults.

Work-family role conflict has also been implicated in studies exploring how employers are affected when employees have eldercare responsibilities. Recent estimates indicate that 68 percent of employed caregivers of older adults made one or more work accommodations (as being late for work, leaving early, extending a break or lunch, etc.) as a result of their eldercare responsibilities (Hepburn & Barling, 1996; National Alliance of Caregiving & AARP, 2009). By the most conservative estimates, businesses lose over seventeen billion dollars yearly due to costs associated with work accommodations and with the need to replace full-time employees who must leave the workforce because of eldercare responsibilities (MetLife Mature Market Institute & National Alliance for Caregiving, 2006).

Many businesses have responded by providing their employees with opportunities to work flexibly, giving them some control over where and when work gets done (Families and Work Institute, 2008; Hill, Grzywacz, Allen, Blanchard, Matz-Costa, Shulkin, & Pitt-Catsouphes, 2008). Examples of working flexibly include working an alternative schedule, working a compressed workweek, and telecommuting, among others. While some research has found that the opportunity to work flexibly benefits

caregivers, findings have been inconsistent (Barnett, Gareis, Gordon, & Brennan, 2009; Barrah, Shultz, Baltes, & Stolz, 2004; Chesley & Moen, 2006; Fredriksen-Goldsen & Scharlach, 2006; Pavalko & Henderson, 2006; Scharlach, Sobel, & Roberts, 1991). More research is needed to understand when and how workplace flexibility is related to caregiver well-being in order to ensure that caregivers offered this resource truly benefit from it.

While a growing body of research has explored the work-family (work-life) interface, surprisingly few of these investigations have focused on employees caring for an older adult specifically. The purpose of this dissertation is to explore how workplace characteristics and resources are related to well-being among employees who provide care to an older family member, and to investigate how employees caring for an older adult compare to their work peers not involved in eldercare in terms of work-family role conflict and psychological well-being. To this end, three specific aims are proposed.

The first aim of this dissertation (Chapter Two) is to investigate the associations between five workplace characteristics (work hours, work overload, workplace flexibility, supervisor support, and a family-supportive workplace environment) and work-family role conflict. Recognizing that these relationships may be moderated by diversity in the caregiving experience, frequency of caregiving (weekly or intermittently) will be evaluated as a potential moderator of the relationships between workplace characteristics and work-family role conflict.

The second aim of this dissertation (Chapter Three) is to develop and test a process model explicating how workplace flexibility impacts caregiver well-being. If supported, this model can offer a possible explanation of the inconsistent findings in this

area of research to date. Additionally, it can serve as a way to discern if flexible work options (and potentially other workplace based resources) are having a positive and significant impact on employee well-being.

The third and final aim of this dissertation (Chapter 4) is to explore if caregivers of older adults who are working for pay report greater levels of stress, depression, and work-family role conflict compared to parents caring for their own children, as well as to those without caregiving responsibilities. The findings of this exploration may offer important insights into the source(s) of distress among caregivers of older adults, which can ultimately inform interventions designed to promote the well-being of caregivers who are also employed.

Literature Review

Much of the literature on the work-eldercare interface is informed by role theory (Akabas & Gates, 2006; Goode, 1960). Work-family role conflict¹ (Greenhaus & Beutell, 1985) is a type of inter-role conflict that occurs when the demands of a family role conflict with the demands of an employee role, or vice versa. An individual is said to experience work-to-family conflict when the demands of the work role make it difficult to meet the demands in a family role, and family-to-work conflict occurs when the demands of a family role make it difficult to meet the demands at work. Work-family role conflict is highest when there is a great deal of interference between roles and few resources available to manage the demands in both roles.

Role conflict may be time-based, behavior-based, or strain-based. Time-based work-family conflict occurs when temporal obligations in one role interfere with role

¹ Additional constructs may include work-family interference, etc. (Dilworth, 2004).

performance in another role (e.g. an important meeting that runs over interferes with the need to pick up a parent from an adult day center). Strain-based work-family conflict occurs when the stressors of one role diminish an individual's ability to meet the role demands in the other role (e.g. disrupted sleep from an agitated family member with Alzheimer's makes it difficult for an individual to remain alert and focused at work). Behavior-based work-family conflict results when the behavioral expectations in one role are contrary to the expectations in the other role (e.g. an aggressive defense attorney finds she relates poorly to her mother-in-law during trials). Work-family role conflict leads to psychological, emotional and/or physical strain, negatively affecting individuals' well-being and role satisfaction and performance (Greenhaus & Beutell, 1985). As work-family role conflict is associated with higher levels of stress, depression, and caregiving strain (Edwards, Zarit, Stephens, & Townsend, 2002; Marks, 1998), caregivers experiencing work-family role conflict may have difficulty meeting the demands of both roles.

Occupying both employee and caregiver roles is not inherently problematic (Cannuscio, Colditz, Rimm, Berkman, Jones, & Kawachi, 2004; Stephens & Townsend, 1997). Providing care to an older family member can be a positive and rewarding experience (Cohen, Colantonio, & Vernich, 2002). In other instances, employment can serve as a buffer against caregiving strain among employees who find their jobs to be very rewarding (Stephens & Townsend, 1997). Ultimately, combining work and caregiving becomes detrimental when role conflict between caregiving and work occurs (Martire & Stephens, 2003).

Some workplace characteristics are more likely to lead employees to experience work-family role conflict, while some resources may help mitigate against it. Research investigating the work-based antecedents of work-family conflict in samples not limited to caregivers of older adults has consistently shown that the number of hours worked and experiencing work overload are consistently related to higher levels of work-family conflict, while employees who report having supportive supervisors, a workplace environment that is responsive to employees' non-work related responsibilities, and access to workplace flexibility have lower levels of work-family conflict (Ford, Heinen, & Langkamer, 2007; Hughes & Parkes, 2007; Voydanoff, 2004).

Few studies have investigated the work-based correlates of work-family conflict among caregivers of older adults (Barrah, Shultz, Baltes, & Stolz, 2004; Neal & Hammer, 2007). Barrah et al. (2004) found that hours worked, supervisor support, and a supportive workplace culture are associated with reduced work-to-family conflict. However, access to flexible work options (a scale comprised of items inquiring about access to specific flexible work options as well as general perceptions about control over work) was not associated with work-to-family conflict. Neal & Hammer (2007) found hours worked, having a supportive supervisor, and working in a supportive workplace environment to correlate with reduced work-to-family conflict among 'sandwiched' employees (i.e. those caring for both children and an older relative). Access to flexible work options (a composite score of the number of flexible work options available and used) was not associated with work-to-family conflict.

Two studies have examined constructs similar to work-to-family conflict (Fredriksen & Scharlach, 1997; Fredriksen-Goldsen & Scharlach, 2006). Fredriksen and

Scharlach (1997) found that hours worked and work demands are associated with increased role strain among university employees providing care to an older adult, while workplace support from coworkers and supervisors is associated with lower levels of role strain. In a later study based on the same sample, Fredriksen-Goldsen and Scharlach (2006) found that work overload was associated with higher levels of workplace accommodations, “the number of workplace adaptations and missed days from work associated with caregiving responsibilities” (p. 445).

More investigation of the work-based correlates of work-to-family conflict among caregivers of older adults is critical. Furthermore, this area of research must also explore if frequency and/or intensity of caregiving moderates the relationship between certain job and workplace characteristics and work-family conflict. For example, employees who provide care to an older adult on a regular weekly basis may have different experiences than those providing care intermittently, as special needs arise (i.e. workplace flexibility may have a stronger effect on work-to-family conflict among intermittent caregivers, as compared to those providing care on a regular weekly basis). Ultimately, reducing the role conflict caregivers experience is critical to their well-being, ensuring they can provide the highest quality care to their loved one without compromising their workforce performance.

More research is also needed to explore how workplace resources may support caregivers who are also working for pay. As an increasing number of businesses are providing flexible work options to their employees (Families and Work Institute, 2008), a number of studies have explored the relationship between workplace flexibility and employee level outcomes. Studies with general employee populations have found that

both perceived flexibility and objective measures of workplace flexibility are associated with improved employee well-being, such as lower levels of stress and burnout (Breugh & Frye, 2008; Grzywacz, Carlson, & Shulkin, 2008; Voydanoff, 2004). Research has also indicated that providing flexible work options may reduce business costs, as workers with access to this flexibility are more likely to remain employed, maintain their work hours, and have fewer absences or missed deadlines (Halpern, 2005; Pavalko & Henderson, 2006). Other studies have found that workplace flexibility has no effect on measures of well-being (Breugh & Frye, 2008; Mesmer-Magnus & Viswesvaran, 2006).

Studies with samples limited to caregivers of older adults have also yielded inconsistent results. Barnett, Gareis, Gordon, and Brennan (2009) found perceived workplace flexibility was negatively related to the level of caregiving concerns. Fredriksen-Goldsen and Scharlach (2006) found that access to workplace resources (which included workplace flexibility) was associated with reduced caregiving strain. Other studies have found that workplace flexibility has no association with employee well-being (Chesley & Moen, 2006; Pavalko & Henderson, 2006; Scharlach, Sobel, & Roberts, 1991). Interestingly, Barrah et al. (2004) found that workplace flexibility was associated with reduced work-family conflict for women but not for men.

These inconsistent findings could be a result of differences in how the construct workplace flexibility is operationalized. Kossek and Michel (2010) identify two distinct approaches that are used to operationalize flexibility: perceived flexibility and access and/or use to formal policies. Perceived flexibility, a more subjective measure, is conceptualized as a “job design feature that refers to an individual’s perceived level of flexibility” and is typically measured “using Likert scales to assess the degree of

perceived flexibility and control concerning the timing of their work” (p. 548).

Conversely, access and/or use of formal policies, a more objective measure, is conceptualized as “involving a formal human resource policy or informal supervisory approved work practice” (p. 548). This type of flexibility is typically measured dichotomously (whether one has access to and/or uses a specific flexible work option) or as an index (total number of flexible work options one has access to and/or uses).

Of course, measuring employees’ *access* to workplace flexibility, rather than their *use* of flexibility may be another limitation, as perceptions of supervisor and organizational support for working flexibility influence employees’ decisions about whether or not to do so (Breugh & Frye, 2008; Thompson, Beauvais, & Lyness, 1999). However, a study measuring workplace flexibility as employee use of vacation time, personal time off, or telecommuting did not find an association between workplace flexibility and caregiver stress (Chesley & Moen, 2006). Unfortunately, to date the literature is too limited to investigate if the inconsistent findings are in fact due to variability in the measurement of workplace flexibility.

Kossek and Michel (2010) theorize that “One likely pathway between flexible schedule use and higher well-being...is lower work-family conflict” (p. 554). The findings of Neal and Hammer (2007) also support the proposition that work-family conflict mediates the relationship between workplace flexibility and caregiver well-being. Neal and Hammer (2007) investigated the effect of an objective measure of workplace flexibility on work-to-family conflict and caregiver well-being among ‘sandwiched’ employees (though only direct relationships were examined). No relationship between workplace flexibility and work-to-family conflict or to any of the four measures of well-

being was found for women. For men, there was no relationship between workplace flexibility and work-to-family conflict or to three of the four measures of well-being (there was a significant association between workplace flexibility and life satisfaction). Given that there was no relationship between alternative work schedules and work-to-family conflict, it is not surprising that workplace flexibility had no impact on caregiver well-being for women and minimal impact for men.

The findings of three recent studies provide additional empirical support that the work-family interface may be a mediating mechanism between workplace flexibility and caregiver well-being. McNall, Masuda, and Nicklin (2010) found work-to-family enrichment mediated the relationship between flexible work arrangements and both job satisfaction and intent to turnover. Carlson, Grzywacz, and Kacmar (2010) found that work-to-family conflict and work-to-family enrichment fully mediated the relationship between schedule flexibility and job satisfaction, as well as the relationship between schedule flexibility and family performance. As a measure of the work-family interface mediated the relationships between workplace flexibility and work outcomes, it is possible that workplace flexibility impacts caregiver well-being through work-family conflict. Jang (2009) found that among parents, perceptions of workplace flexibility were negatively associated with work-family conflict, which in turn, was negatively associated with well-being. However, Jang did not specifically test for mediation between workplace flexibility and well-being. Additionally, none of these three studies were limited to caregivers of older adults.

Caring for an older adult is a vastly different experience than caring for a child. While many make a conscious choice to become parents, caring for an older adult is not a

role one actively pursues, and in many cases eldercare represents the “involuntary transformation” of an important relationship (Pearlin, 1990, p. 584). Additionally, program availability varies greatly between children and older adults needing care (Brantman, 2003). For example, there are approximately 4,600 adult day centers in the U.S. (National Adult Day Services Association, 2010); conversely, there are nearly 120,000 child care centers (not including home-based child-care) in the U.S. (National Association of Child Care Resource and Referral Agencies, 2011). While caregivers of older adults may be hard-pressed to find a local care facility, parents are not likely to face the same difficulty (though they may have concerns about cost and quality). Notably, Gareis and Barnett (2008) found that parents of school age children who were satisfied with the available community programs reported higher perceptions of work-to-family enhancement.

Perhaps even more importantly, community programs “link the caregiver to the larger community (which serves to) reduce the isolation and alienation that many caregivers experience” (Pearlin, 1990, p. 586). If there are fewer resources available for older adults, there are also fewer opportunities for caregivers of older adults to connect with one another to create formal and informal support networks (a key mediator of caregiving distress). Berkman, Gardner, Zodikoff, and Harootyan (2005) report that adequate psychosocial support is instrumental to enhancing the well-being of family caregivers, and subsequently, the well-being of care recipients.

Additionally, caring for an older adult is generally more unpredictable, marked by acute crises that can unexpectedly increase caregiving demands. A study by Sims-Gould, Martin-Matthews, and Gignac (2008) found that nearly half of caregivers of older adults

reported a crisis related to caregiving in the prior six months. These crises, typically due to the deterioration in the health of the care recipient, led to increased caregiving demands, either temporarily or permanently. Caring for an older adult typically involves a greater level of involvement with a complex healthcare system, and in some cases, actually requires performing critical medical procedures (Guberman, Gagnon, Cote, Gilbert, Thivierge, & Tremblay, 2005; Guberman & Maheu, 1999; Kossek, Colquitt, & Noe, 2001).

Finally, the meaning ascribed to caregiving differs between those caring for children and those caring for older adults, even if some of the caregiving activities are similar (Kossek, Colquitt, & Noe, 2001). For the most part, children become more independent as they age, transitioning through each stage of childhood and adolescent development (with many celebrations along the way) as they become adults. Conversely, eldercare recipients become more dependent as they age and caregiving only fully concludes with their death, even if they are placed in a nursing home or similar facility. Caring for a child also offers far more public role rewards than does caring for an older adult (Franks, 2009).

These differences suggest that the effects of caregiving may vary, based on the type of care one is providing (e.g. eldercare, childcare, etc.). To date, three studies have shown no significant differences in work-family role conflict between employees caring for older adults and those caring for children (Chapman, Ingersoll-Dayton, & Neal, 1994; Kossek, Colquitt, & Noe, 2001, & Lee, Foos, & Clow, 2010). Ultimately, caring for an older adult may exact a higher emotional toll on caregivers while providing fewer role rewards (Buffardi, Smith, O'Brien, & Erdwins, 1999). Therefore, it is plausible that

caregivers of older adults who are also working for pay would experience greater strain and higher rates of depression than those caring for children, even if levels of role conflict are similar between groups. Little research has explored the relationship between type of dependent care responsibility and employee outcomes such as work-family role conflict and employee well-being.

It remains unclear if employees caring for an older adult report greater stress than employees caring for a child. In a study limited to hospital nurses, Scott, Hwang, and Rogers (2006) found no differences in perceived stress among those caring for a child or older adult, though those caring for an older adult at home reported greater fatigue. To date, no study has explored if there are differences in the likelihood of reporting depressive symptoms between those caring for an older adult and those caring for children.

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Chapter Two: Work-family conflict among caregivers of older adults

Abstract

As the number of Americans age 65-plus will nearly double over the next twenty years, the vast majority of workers can expect to provide care to an elder relative at some point during their tenure in the workforce. This study explores the work-based antecedents of work-family conflict among caregivers of older adults. Utilizing a sample of 465 respondents from the National Study of the Changing Workforce (2008), OLS regression analysis indicates that work hours and work overload are positively correlated with work-family conflict while perceptions of supervisor support, access to workplace flexibility, and perceptions of a family friendly workplace environment are negatively correlated with work-family conflict. Further investigation of the moderating effect of caregiving frequency (weekly vs. intermittently) reveals that access to workplace flexibility is particularly important for reducing work-family conflict among intermittent caregivers. Implications of this investigation are discussed.

Introduction

The aging of the population is accompanied by an increase in greater numbers of people needing help with Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) for longer period of time. While less than 3 percent of adults ages 65-74 have any ADL limitations, nearly 10 percent of adults age 85 and older need assistance with one or more ADLs. Similarly 6.2 percent of adults ages 65-74 have IADL limitations, compared to 35.3 percent of adults age 85 (Centers for Disease Control and Prevention, 2009). More than 80 percent of the care provided to older adults who need assistance is provided by family members (National Alliance for Caregiving and Evercare, 2009). The majority of these family caregivers are also active in the workforce. In a 2008 survey of the U.S. workforce, over 40 percent of workers reported having provided care to a relative aged 65 or older within the past five years; 17 percent reported doing so currently (Aumann, Galinsky, Sakai, Brown, & Bond, 2010). As the number of Americans age 65-plus will nearly double over the next twenty years (Administration on Aging, 2010), a growing number of workers can expect to provide care to an elder relative at some point during their tenure in the workforce.

Unfortunately, the experiences of today's caregivers make this a foreboding future reality. Workers who provide care for an older relative or friend report significantly poorer physical and mental health than their workforce counterparts without this responsibility (Greenberg, Seltzer, & Brewer, 2006; Metlife Study of Working Caregivers and Employer Health Costs, 2010). Additionally, the majority experience conflict in trying to manage both work and caregiving roles (Families and Work Institute, 2002), leading to significant costs to businesses as well (National Alliance of Caregiving

& AARP, 2009). Ultimately, reducing the role conflict caregivers experience is critical to their well-being, ensuring they can provide the highest quality care to their loved one without compromising their workforce performance and their own health. The purpose of this chapter is to identify the job and workplace characteristics associated with work-family conflict among caregivers of older adults.

The majority of family caregivers of older adults are female; the approximate age of a family caregiver of an older adult is fifty years of age. The ‘average’ family caregiver provides nearly 20 hours of care every week, and has done so for a period of four years. The majority of caregivers also report assisting their care recipient with at least one activity of daily living (ADL) and three instrumental activities of daily living (IADLS) (National Alliance for Caregiving and AARP, 2009).

However, there is a great deal of variability among caregivers. A third of caregivers are male. Surveys indicate caregivers ranging in age from 18 to 75 years of age and older (National Alliance of for Caregiving and AARP, 2009)—indicating that caregiving can occur at any point in the course of life. Caregivers also differ in the frequency, demands, and duration of caregiving. Three percent report providing less than an hour of care a week on average, while 11 percent report providing more than forty hours of care a week. Nearly a third of caregivers help with three or more ADLs while over a third provide no ADL assistance to their care recipient. Finally, twelve percent report that they have been caregivers for 10 or more years and 16 percent report providing care for less than six months. Despite these variabilities, role conflict is a common complaint among employed caregivers of older adults (National Alliance of for Caregiving and AARP, 2009). However, it remains unclear if certain diversities in the

caregiving experience (i.e. providing care on a regular weekly basis vs. as special needs arise) might moderate the relationship between certain work characteristics and role conflict.

Theoretical Framework

An outgrowth of role theory (Goode, 1960), work-family conflict² is a bi-directional, micro level theory that has been conceptualized as a specific type of inter-role conflict that occurs when the demands of a family role conflict with the demands of an employee role, or vice versa. An individual is said to experience work-to-family conflict when the demands of the work role make it difficult to meet the demands in a family role, and family-to-work conflict occurs when the demands of a family role make it difficult to meet the demands at work. Work-family conflict is highest when there is a great deal of interference between roles and few resources available to manage the demands in both roles. The theory predicts that the experience of work-family conflict leads to psychological, emotional and/or physical strain, negatively affecting individuals' well-being and role satisfaction and performance (Greenhaus & Beutell, 1985).

Role conflict may be time-based, behavior-based, or strain-based. Time-based work-family conflict occurs when temporal obligations in one role interfere with role performance in another role (e.g. an important meeting that runs over interferes with the need to pick up a parent from an adult day center). Strain-based work-family conflict occurs when the stressors of one role diminish an individual's ability to meet the role demands in another role (e.g. disrupted sleep from an agitated family member with

² Additional constructs may include work-family interference, etc. (Dilworth, 2004).

Alzheimer's makes it difficult for an individual to remain alert and focused at work).

Behavior-based work-family conflict results when the behavioral expectations in one role are contrary to the expectations in the other role (e.g. an employee grieving the physical and mental decline of a loved one struggles to remain 'on' at work).

Some research suggests that holding both the caregiving and employment roles tends to produce stress and strain whereas other studies suggest that employment might buffer the negative outcomes associated with caregiving (Cannuscio, Colditz, Rimm, Berkman, Jones, & Kawachi, 2004; Lee, Walker, & Shoup, 2001; Stephens & Townsend, 1997). Martire and Stephens (2003) have theorized that combining work and caregiving becomes detrimental when role conflict between caregiving and work roles occur. Findings from Marks (1998) support the assertion that role conflict is indeed the source of strain among employed caregivers: Differences in well-being between employees who were caregivers³ and employees who were not caregivers were fully or partially mediated by work-family conflict.⁴ Additionally, "When levels of work-family conflict are held constant across caregiving and noncaregiving employed adults, some unexpected and beneficial suppressed effects of caregiving on well-being become evident" (Marks, 1998, p. 963). This finding is consistent with literature that indicates that providing care to an

³ Caregiving status was not limited to those caring for older adults, as it was operationalized as whether the respondent "gave personal care for a period of 1 month or more to a family member or friend 18+ because of a physical or mental condition, illness, or disability" (p. 956). However, providing care to a parent was the most prevalent type of caregiving.

⁴ This was true for most caregiving dyads (Marks utilized eight measures of well-being and examined each caregiving dyad individually).

older family member can be a positive and rewarding experience (Cohen, Colantonio, & Vernich, 2002).

Literature Review

Over the past thirty years, a body of research has investigated the outcomes and antecedents of work-family conflict. Work-family conflict is associated with a number of important work, family, and well-being outcomes, including job satisfaction, absenteeism, job burnout, organizational commitment, and job performance, as well as family satisfaction, life satisfaction, depression, stress, and health problems (Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Frone 2003; Rantanen, Mauno, Kinnunen, Rantanen, 2011). Research investigating the work-based antecedents of work-family conflict has consistently shown that number of hours worked and experiencing work overload are consistently related to higher levels of work-family conflict, while employees who report having supportive supervisors, a workplace environment that is responsive to employees' non-work related responsibilities, and access to workplace flexibility have lower levels of work-family conflict (Ford, Heinen, & Langkamer, 2007; Hughes & Parkes, 2007; Voydanoff, 2004).

However, there are important differences between those caring for children and those caring for older adults, as well as in the providing of care. Therefore, the antecedents of work-family conflict may be different for employees caring for an older adult as compared to those caring for a child. On average, caregivers of older adults tend to be older themselves, as compared to caregivers of children. Among those active in the workforce, the average age of a parent with one or more child is 41; the average age of caregivers of older adults is 49 years of age. Caregivers of older adults may be more

likely to become caregivers reluctantly—43 percent of caregivers of older adults feel they did not have a choice in taking on responsibility for caring for a family member (National Alliance of for Caregiving and AARP, 2009). Conversely, many of those caring for children actively chose to become parents.

The provision of eldercare differs from childcare in a number of important ways. Older adults generally need an increasing level of care (Centers for Disease Control and Prevention, 2009). Caring for an older adult typically ends when they die, and it is not uncommon for those whose caregiving experience has ended to report continued interference with work responsibilities (Aumann, Galinsky, Sakai, Brown, & Bond, 2010). Conversely, children generally require less care as they age; employees with young children report greater work interference than those with school aged or older children (Frone, 2003; Moore, Sikora, Grunberg, & Greenberg, 2007).

Caring for an older adult may be more unpredictable than caring for a child (though employed parents do report breakdowns in care (such as when a child is sick) (Gordon, Kaestner, & Korenman, 2008). Sims-Gould, Martin-Matthews, and Gignac (2008) found that nearly half of caregivers of older adults reported a crisis related to caregiving in the prior six months. These crises, typically due to the deterioration in the health of the care recipient, led to increased caregiving demands, either temporarily or permanently (Sims-Gould, Martin-Matthews, & Gignac, 2008). Not surprisingly, caring for an older adult typically involves a greater level of involvement with a complex healthcare system, and in some cases, actually requires performing critical medical procedures (Guberman, 2005; Guberman & Maheu, 1999; Kossek, Colquitt, & Noe, 2001).

Finally, the availability and accessibility of community-based caregiving resources may be far greater for parents than for caregivers of older adults. While daycare centers and schools provide care and instruction to children, far fewer institutions are available to care for older adults needing assistance (Brantman, 2003; National Adult Day Services Association, 2010; National Association of Child Care Resource and Referral Agencies, 2011). Given these differences, what we know about work-family conflict for working parents might not be applicable to the experiences of employees caring for older adults.

Few studies have investigated the work-based correlates of work-family conflict (or similar constructs) among caregivers of older adults (Barrah, Shultz, Baltes, & Stolz, 2004; Fredriksen & Scharlach, 1997; Fredriksen-Goldsen & Scharlach, 2006; Neal & Hammer, 2007). Barrah et al. (2004) found that hours worked, supervisor support, and a supportive workplace culture were associated with reduced work-to-family conflict. However, access to flexible work options (a scale comprised of items inquiring about access to specific flexible work options as well as general perceptions about control over work) was not associated with work-to-family conflict. Neal and Hammer (2007) found hours worked, having a supportive supervisor, and working in a supportive workplace environment to correlate with reduced work-to-family conflict among ‘sandwiched’ employees (i.e. those caring for both children and an older relative). Access to flexible work options (a composite score of the number of flexible work options available and used) was not associated with work-to-family conflict.

Two studies have examined constructs similar to work-to-family conflict among caregivers of older adults. Fredriksen and Scharlach (1997) found that hours worked and

work demands were associated with increased role strain among university employees providing care to an older adult while workplace support from coworkers and supervisors was associated with lower levels of role strain. In a later study based on the same sample, Fredriksen-Goldsen and Scharlach (2006) found that work overload was associated with higher levels of workplace accommodations, “The number of workplace adaptations and missed days from work associated with caregiving responsibilities” (p. 445).

Interestingly, while workplace flexibility (operationalized in both studies as a scale comprised of various flexible work policies) was not associated with a reduction in workplace accommodations (the 2006 study) but was associated with decreased role strain (the 1997 study).

It is unclear why findings about the relationship between workplace flexibility and work-to-family conflict (and similar constructs) are inconsistent. One possible explanation is these studies did not differentiate between caregivers who provide care intermittently and those who provide care on a regular weekly basis. Each of the studies⁵ asked respondents how many hours of care they provided to an older adult each week. It is unclear whether those who indicated providing zero hours of regular care each week were removed from the analyses (It is also possible that those providing care intermittently may have ‘averaged’ the number of hours of care they provided to fit this

⁵ Barrah et al. (2004) utilized data from the 1997 NSCW and included participants who indicated that they currently provide special attention or care to someone 65 years of age or older. Neal & Hammer collected data from a university and asked respondents if they help out their parents or parents-in law in some way. Fredriksen-Goldsen & Scharlach (1997; 2006) collected data from a university and inquired if respondents provided informal care to a friend or family member 65 years of age or older who had a health problem or disability.

question). It is plausible that access to workplace flexibility is particularly critical to those providing care intermittently, as it can be difficult to predict when special needs may arise. Those providing care on a regular weekly basis likely provide care more predictably, and may have an easier time of managing caregiving responsibilities during non-work hours.

More investigation of the work-based correlates of work-to-family conflict among caregivers of older adults is critical. Furthermore, this area of research must also explore if variabilities in caregiving (i.e. frequency, demands, or duration) moderate the relationship between certain job and workplace characteristics and work-family conflict. This study will replicate previous investigation of the work-based correlates of work-family role conflict among older adults while also examining if caregiving frequency moderates the relationship between certain workplace characteristics and work-to-family conflict among caregivers of older adults.

The conceptual model guiding this research is shown in Figure 1.

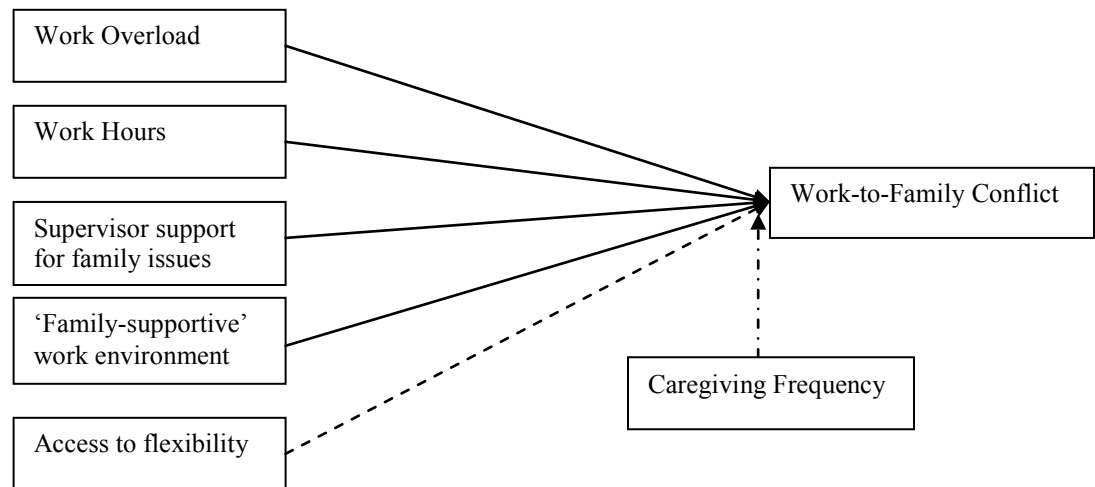


Figure 1. Conceptual Model of the Work-based Correlates of Work-to-Family Conflict and Proposed Moderation by Caregiving Status⁶

Research Questions

The following research questions (RQ) are proposed:

RQ1: Does caregiving frequency moderate the association between work overload and work-to-family conflict among caregivers of older adults?

RQ2: Does caregiving frequency moderate the association between work hours and work-to-family conflict among caregivers of older adults?

RQ3: Does caregiving frequency moderate the association between supervisor support and work-to-family conflict among caregivers of older adults?

RQ4: Does caregiving frequency moderate the association between the workplace environment and work-to-family conflict among caregivers of older adults?

⁶ The solid black lines indicate associations that have been found in previous research. The dashed lines indicate associations that remain unclear or have not been tested.

RQ5: Does caregiving frequency moderate the association between access to workplace flexibility and work-to-family conflict among caregivers of older adults?

Methodology

Sample

This project utilizes cross-sectional data from the 2008 National Study of the Changing Workforce (NSCW), a repeated cross-sectional design national survey of the United States labor force that has been collected every five years since 1992. For the 2008 wave, Harris Interactive conducted 3,502 interviews between November 2007 and April 2008 using computer-assisted telephone interviewing. Interviews lasted approximately 50 minutes. The simple random probability sample (stratified by region) was generated by random-digit-dial methods and limited to non-institutionalized adults (18+) working a paid job or operating an income producing business (in the civilian labor force) and living within the 48 contiguous states.⁷ In households with more than one eligible person, one was selected randomly to be interviewed. The response rate was 54.6 percent. Interviewers initially offered a cash honorarium of \$25 as incentives and if refused, a higher amount (\$50) was offered. Of the 3,502 participants, there are 2,769 wage and salaried workers,⁸ and 2,480 who indicate that one particular person is their supervisor or boss. Of this sample, data from the 465 respondents (276 female) who

⁷ The sample was weighted by sex, race, and educational status to the March 2007 Current Population Survey to adjust for any sampling bias that might have occurred.

⁸ Excluding independent contractors and business owners

report that they are currently providing special care or attention to a relative 65 years of age or older will be used to conduct the analyses.

Measures

Work-to-family conflict. Work-to-family conflict was operationalized as a scale of five items asking about the frequency (1 ‘Never’ to 5 ‘Very Often’) in which participants experienced time-based and strain-based work-to-family conflict in the past 3 months. Sample items include: “How often have you NOT had enough time for your family or other important people in your life because of your job?” and “How often has work kept you from doing as good a job at home as you could?” To create a scale, items were first reverse coded so that a higher score was indicative of greater conflict between domains. If a respondent answered at least four of the five items, the mean of the valid items was used to form the scale. As the variable was slightly positively skewed, the square root of the variable was taken to address concerns with normality. The alpha reliability for the analytic sample was .86. All items that comprised the scale can be found in Appendix A.

Caregiving frequency. Respondents who indicated that they provided care on a regular (weekly) basis were coded as ‘1’ and respondents indicating that they provided care intermittently were coded as ‘0.’

Work overload. Work overload was operationalized by creating a scale of three items that inquire about the frequency (1 ‘Never’ to 5 ‘Very Often’) respondents feel overwhelmed at work, or do not have enough time to complete the work assigned to them. If a respondent answered at least two of the three items, the mean of the valid items

was used to form the scale. The reliability of this scale for the analytic sample is .79. All items that comprised the scale can be found in Appendix A.

Work hours. Work hours were measured as the self-report of the total hours worked in an average week at their main job.⁹

Supervisor support for family issues. This variable was operationalized as a scale of five items inquiring to what extent respondents agree or disagree (1 ‘strongly agree’ to 4 ‘strongly disagree’) that their supervisor is receptive and understanding of family needs that arise. Sample items include: “My supervisor or manager is responsive to my needs when I have family or personal business to take care of -- for example, medical appointments, meeting with child's teacher, etc.” and “My supervisor or manager is understanding when I talk about personal or family issues that affect my work.” Responses were reverse coded so a higher score was indicative of higher perceptions of support. If a respondent answered at least four of the five items, the mean of the valid items was used to form the scale. As the scale was negatively skewed (i.e., most people felt high support), the scale was squared in order to address concerns with normality. The alpha reliability of this scale for the analytic sample is .88. All items that comprised the scale can be found in Appendix A.

Perceptions of a family supportive work environment. Perceptions of a family supportive workplace environment was operationalized as the extent to which respondents agree (1 ‘strongly agree’ to 4 ‘strongly disagree’) that “employees (at their organization) do not have to choose between advancing in their job or devoting attention

⁹While some respondents indicated having more than one job, operationalizing work hours as total hours worked at all jobs did not alter the results.

to their family/personal lives.” Responses were dummy-coded using the following categories: strongly agree, slightly agree, and slightly/strongly disagree (reference group). Again, ‘slightly disagreed’ and ‘strongly disagreed’ categories were combined due to limited power to detect a significant effect at $p < .05$.

Perceptions of workplace flexibility. This variable was operationalized as the extent to which respondents agree (1 ‘strongly agree’ to 4 ‘strongly disagree’) that they have the schedule flexibility needed at work to manage personal and family responsibilities. Responses were dummy-coded using the following categories: strongly agree, slightly agree, and slightly/strongly disagree (reference group). While single item Likert responses are occasionally treated as continuous data, the general recommendation is to treat them categorically (Clason & Dormody, 1993; McCall, 2001). Some studies combine responses (typically an ‘agree’ group vs. a ‘disagree’ group), though this strategy may overlook differences among those collapsed into the same group. This study nonetheless combined respondents who ‘slightly disagreed’ with those who ‘strongly disagreed’ because a power analysis indicated that the sample of respondents who ‘strongly disagreed’ was not large enough to detect a significant effect at $p < .05$.

Sex. Respondents indicated their gender as either male or female. A dichotomous variable was created, with females coded as 1 and males coded as 0.

Age. Respondents indicated their age in years. As age was negatively skewed, three respondents who indicated that they were older than 75 years of age were top coded to 69 years of age; the variable was then squared.

Health status. Respondents were asked to rate their overall health as either ‘excellent’, ‘good’, ‘fair’, or ‘poor.’ Due to the small number of respondents ($N = 13$)

reporting poor health, respondents reporting excellent or good health were coded as 1 and respondents reporting fair or poor health were coded as 0. This coding strategy is well established in research on health and well-being (Chen, Martin, & Matthews, 2006).

Race. Respondents were asked to identify their race as White; Black or African American; Asian, Pacific Islander, or Indian; or Other, including mixed. Due to small sample sizes, respondents who identified themselves as White were coded as 1 and respondents who identified as another race were coded as 0.

Marital status. Respondents indicating that they were married or living with their partner were coded as 1 and all other respondents were coded as 0.

Presence of child(ren) at home. Respondents who indicated that they had one or more children under 18 years of age living with them at least half time were coded as 1 and all other respondents were coded as 0.

Analytic Strategy

Data was managed and analyzed using STATA 11.0 IC. Hierarchical ordinary least squares (OLS) regression was used, with control variables entered first, followed by the key independent variables in the second step. In the third and final step, significant interactions between elder caregiving status (weekly vs. intermittent) and the proposed work-based correlates of work-to-family conflict were included in the model.

Missing Data

Variable non-response ranged from 0 percent to 2 percent. Twenty-six cases with missing data for one or more variables were removed, yielding a final sample of 439 cases. Overall, this represents a total of 5.6 percent of cases lost due to listwise deletion.

Results

The means, standard deviations, and correlations of study variables are found in Table 1. The majority of the sample are married (65%), female (60%), and White (85%). Additionally, 80 percent reported that they were in ‘good’ or ‘excellent’ health. Forty percent of caregivers reported that they provided care on a regular (weekly basis). In addition, 35 percent reported that they had one or more children under 18 living with them. The mean level of work-to-family conflict (untransformed) was 2.66 (SD 0.86).

The results of the hierarchical regression can be found in Table 2. In the first step, the control variables were regressed on work-to-family conflict. Health status was the only control variable significantly associated with work-to-family conflict in this model and in all subsequent models. In the final model, those in ‘excellent’ or ‘good’ health reported significantly less conflict than those in ‘fair’ or ‘poor’ health ($b_{\text{StdY}} = -0.33$; $p < .01$), indicating that being in poorer health results in a .33 standard deviation increase in work-to-family conflict.

In the second step the proposed correlates of work-to-family conflict (work overload, work hours, supervisor support, supportive workplace environment, and access to workplace flexibility) were added to the model. As found in previous research, work hours ($b_{\text{StdY}} = 0.02$; $p < .001$) and work overload ($b_{\text{StdY}} = 0.22$; $p < .001$) were both associated with higher perceptions of work-to-family conflict while supervisor support was associated with lower perceptions of work-to-family conflict. Each one-unit increase in supervisor support was associated with a .06 standard deviation decrease in work-to-family conflict. Having a supportive workplace environment was also associated with lower perceptions of work-to-family conflict. Those who ‘strongly agreed’ that they did

not have to choose between advancing in their jobs and personal/family responsibilities reported significantly less conflict, compared to those who ‘slightly/strongly disagreed’ (bStdY= -0.03; $p<.001$).¹⁰ Access to workplace flexibility was also associated with work-to-family conflict in this step. Those who reported that they ‘strongly agreed’ that they had the flexibility needed to manage work and personal/family responsibilities reported significantly less conflict as compared to those who ‘slightly/strongly disagreeing’ with this statement (bStdY= -0.39; $p<.01$.).¹¹

In the final step, interactions between caregiving status (regular or intermittent) were added to the model. There was a significant interaction between caregiving status and flexibility: access to flexibility had a stronger effect on reducing work-to-family conflict among intermittent caregivers, as compared to regular (weekly) caregivers. No other interaction effects were significant.

¹⁰ There was no difference between those who ‘slightly agree’ and those who ‘slightly/strongly disagreed’ that they had to choose between advancing in their jobs and family responsibilities.

¹¹ Those who reported that they ‘strongly agreed’ that they had the flexibility needed to manage work and personal/family responsibilities reported significantly less conflict as compared to those only ‘slightly agreeing’ with this statement.

Table 1

Mean, standard deviations, and correlations of variables (N=439)¹

Variable	M(SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Work-Family conflict	2.66(.87)														
2. Female	.60	.01													
3. Age	47.53 (10.10)	-.09	.05												
4. White	.85	-.06	-.07	.12*											
5. Child<18	.35	.03	-.01	-.31***	-.04										
6. Excellent/good health	.80	-.22***	-.12*	.07	.18**	.04									
7. Married	.65	-.11*	-.13**	.14**	.10*	.18**	.13**								
8. Weekly care	.40	.07	.06	.07	-.05	-.02	-.10*	-.09							
9. Supervisor support	3.29(.75)	-.37***	-.02	.07	.07	-.01	.13**	.07	-.05						
10. Work hours	41.97 (13.12)	.28***	-.26***	.03	-.04	.03	.01	-.04	.01	-.08					
11. Work overload	3.45(1.07)	.42***	.06	-.05	.06	-.02	-.02	-.04	.07	-.21***	.23***				
12. Have flex (SA)	.48	-.38***	-.04	.004	.02	.07	.07	.001	-.01	.32***	-.11*	-.23***			
13. Have flex (SLA)	.30	-.07	-.02	.02	.08	-.04	.04	.13**	-.04	.01	.01	.03	-.62***		
14. Supp. env. (SA)	.29	-.23***	.11*	-.01	.06	.02	.01	.02	.04	.14**	-.06	-.16**	.23***	-.14**	
15. Supp. env. (SLA)	.30	-.06	-.06	.03	.05	-.03	.12*	.10*	-.10*	.06	-.01	.01	-.04	.12**	-.42***

¹Untransformed values for all study variables are reported

Note: SA(strongly agree); SLA(slightly agree)

*p<.05; **p<.01; ***p<.001

Table 2

Unstandardized OLS Coefficients for Work-to-family conflict (square root) (N=439)

	Unstand. Coefficients (SE)	Unstand. Coefficients (SE)	Unstand. Coefficients (SE)
Female	-.003(.03)	.01(.03)	.01(.03)
Age (squared)	.00(.00)	.00(.00)	.00(.00)
White	.04(.03)	.03(.03)	.03(.03)
Excellent/good health	-.09(.04)*	-.09(.03)**	-.09(.03)**
Married/cohabiting	-.06(.04)	-.03(.03)	-.03(.03)
Child(ren) < 18	.04(.03)	.05(.03)	.05(.03)
Weekly eldercare ¹	.03(.03)	.01(.03)	-.07(.05)
Supervisor support for family issues (squared)		-.02(.003)***	-.02(.003)***
Work hours		.005(.001)***	.004(.001)***
Work overload		.06(.01)***	.06(.01)***
Have flexibility (strongly agree) ²		-.10(.04)**	-.16(.05)**
Have flexibility (slightly agree) ²		-.03(.04)	-.05(.05)
Family-supportive work environment (strongly agree) ²		-.08(.03)*	-.09(.03)**
Family-supportive work environment (slightly agree) ²		-.02(.03)	-.03(.03)
Have flexibility (strongly agree) X Weekly elder care			.13(.06)*
Have flexibility (slightly agree) ¹ X Weekly elder care			.05(.07)
Constant	1.67(.07)***	1.52(.09)***	1.54(.09)***
R ²	.04	.39	.40

Note: For greater ease in interpreting the coefficients, refer to Appendix B for coefficients standardized in Y.

¹Reference group intermittent caregivers

²Reference group slightly/strongly disagree

*p<.05; **p<.01; ***p<.001

Discussion

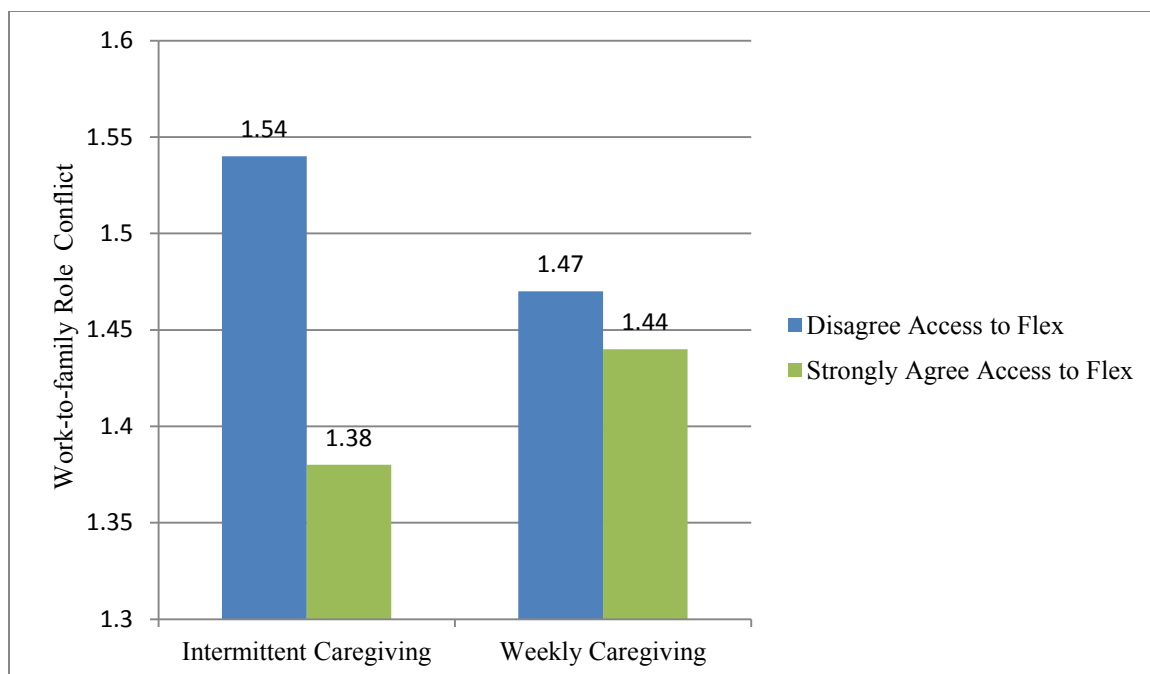
Consistent with previous research, work hours, supervisor ‘work-family’ support, perceptions of a family supportive workplace environment, and work overload were all associated with work-family conflict among caregivers of older adults. Higher perceptions of supervisor and workplace support were negatively associated with work-family conflict while work hours and perceptions of work overload were positively associated with work-family conflict. Additionally, access to workplace flexibility was found to be associated with lower levels of work-to-family conflict, a finding not supported in three previous studies. Further analysis indicated an interaction effect between access to flexibility and whether one provided care on a regular weekly basis or intermittently. No other significant interaction effects were found.

As shown in Figure 2, the effect of flexibility was much stronger for caregivers providing care on an intermittent basis, as compared to those providing care on a regular weekly basis. Among caregivers who disagreed that they had access to flexibility, intermittent caregivers had higher levels of work-family conflict than weekly caregivers (M: 1.54 vs. 1.47). When comparing caregivers who ‘strongly’ agreed that they had access to flexibility, the reverse was true: weekly caregivers had higher levels of work-family conflict than those not providing care every week (M: 1.38 vs. 1.44). The magnitude of this difference for intermittent caregivers (0.16) is approximately two-thirds of a standard deviation (SD: 0.27). For weekly caregivers, however, access to flexibility has no effect on work-to-family conflict.¹²

¹² An analysis was run limiting the sample to weekly caregivers (B= -.03; p=0.62)

This finding makes an important contribution to previous research examining the effect of workplace flexibility on work-to-family conflict among caregivers of older adults (three of which found no association between access to flexibility and work-to-family conflict, and one which did). In previous studies, the effect of caregiving frequency (weekly vs. intermittent) was not examined. Ultimately, there may be important differences between caregivers who provide care on a regular weekly basis, and those who do so intermittently. It is possible that caregivers who provide care on a regular weekly basis have a stable weekly routine (for example, providing care Tuesday and Thursday evenings and during the weekend) while intermittent caregivers cannot always anticipate when they will be needed. Having access to flexible work options might alleviate some of the stress associated with an inability to plan for the next crisis or special need. Conversely, intermittent caregivers without access to workplace flexibility may feel unsure about how they will meet both work and caregiving responsibilities when a crisis does occur, and thus experience a great deal more role conflict.

However, more research is needed to conclude that caregiving status is indeed a critical factor in explaining the relationship between access to workplace flexibility and work-to-family conflict among caregivers of older adults. The differences in findings among studies may also be a function of measurement variance, given that the measure of workplace flexibility has not been consistent among studies.



Note: Higher scores are indicative of higher levels of perceived work-family conflict.

Figure 2. Caregiving frequency as a moderator of the access to flexibility-work-to-family role conflict relationship. Predicted values are calculated when all other variables in the model are equal to zero.

Limitations

This study has a number of limitations. Most notably, because of the cross-sectional design, causal relationships between variables cannot be established. For example, it is theoretically possible, although unlikely, that perceptions of work-family conflict lead employees to work more hours, rather than longer work hours leading to increased work-family conflict. Additionally, while single item measures have been shown to have criterion validity (Wanous, Reichers, & Hudy, 1997), some may argue that more comprehensive measures of some study variables (access to flexibility, perceptions of a family-friendly workplace environment) are warranted. A third limitation is related to the secondary design of this study. As measures of supervisory status and perceptions

of caregiving demands were not included in the NSCW (2008) survey, it was not possible to control for these factors in the analyses.

Implications

The findings of this investigation have significant implications for employers, managers, and human resource professionals. It is noteworthy that employees who only ‘slightly agreed’ that they had a supportive environment did not report lower work-family conflict than those who ‘slightly/strongly disagreed.’ This indicates that employees must feel very strongly that their workplace environment is truly supportive when family needs arise to experience any reduction in work-family conflict. Ultimately, ambiguities in the extent of a workplace environment’s ‘family friendliness’ may matter quite a bit to employees’ work-family conflict, and ultimately, other outcomes related to it (Mennino, Rubin, & Brayfield, 2005).

Therefore, employers interested in supporting caregivers of older adults should consider if their organization fully recognizes and supports the needs of employees who are providing care to an older adult. For example, if resources offered are targeted primarily towards parents, caregivers of older adults may only ‘slightly agree’ that their workplace environment is supportive of employees with family responsibilities. Employers striving to create a workplace environment that is supportive of employees’ family roles and responsibilities should ensure the resources they offer and the messaging used to communicate the availability of these resources and messaging is relevant to all employees, including caregivers of older adults.

Finally, as employers examine outcomes related to offering various workplace resources, it might be reasonable to anticipate that there could be differences among

caregivers based on the frequency of care provided. Flexibility might be helpful when caregiving occurs only intermittently, as special needs arise. However, when caregivers provide care on a regular weekly basis, it might be necessary for employers to introduce ‘flexibility plus other resources’ if they want to have a measurable impact on work-to-family conflict.

Future Research

Future research is needed to fully explicate the relationships between job and workplace characteristics and work-family conflict among caregivers of older adults, as well as other important outcomes related to caregiver and care recipient well-being. Longitudinal designs with rigorous measures of all study variables will allow researchers to make casual inferences between variables. Researchers might consider utilizing Experience Sampling Methods (Larson & Csikszentmihalyi, 1983) to capture the ‘in the moment’ experience of those providing care intermittently versus those providing care on a regular basis.

The effect of workplace flexibility on caregivers’ perceived work-family conflict (and overall well-being) also merits additional attention. Future research should triangulate the measurement of workplace flexibility. Future investigations might consider controlling for additional variables, including supervisory status and level of perceived caregiving demands. Further investigation of moderating effects of caregiver characteristics (e.g. gender) and caregiving characteristics (e.g. intensity) is also necessary. Ultimately, these future investigations will allow for the design and implementation of interventions to support all working caregivers of older adults.

Conclusion

Research continues to demonstrate that a great proportion of distress experienced by employed caregivers of older adults is in fact due to work-family conflict (Gignac, Kelloway, & Gottlieb, 1996; Lyonette & Yardley, 2006; Marks, 1998; Martire & Stephens, 2003). This study makes an important contribution to the body of knowledge on employed caregivers by replicating previous research and suggesting that the relationship between workplace flexibility and work-to-family conflict may be moderated by caregiving frequency. This knowledge can inform efforts to alleviate caregivers' work-family conflict, which is critical to ensuring the well-being of growing numbers of caregivers as well as care recipients.

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Appendix A

Measures

Work-to-family Conflict

Over the past 3 months...?

1. Very Often
 2. Often
 3. Sometimes
 4. Rarely
 5. Never
-
1. How often have you NOT had enough time for your family or other important people in your life because of your job?
 2. How often have you NOT had the energy to do things with your family or other important people in your life because of your job?
 3. How often has work kept you from doing as good a job at home as you could?
 4. How often have you NOT been in as good a mood as you would like to be at home because of your job?
 5. How often has your job kept you from concentrating on important things in your family or personal life?

Work Demands

1. Very often
 2. Often
 3. Sometimes
 4. Rarely
 5. Never
-
1. How often have you felt overwhelmed by how much you had to do at work in the last three months?
 2. During a typical workweek, how often do you have to work on too many tasks at the same time?
 3. During a typical workweek, how often are you interrupted during the workday, making it difficult to get your work done?

Supportive 'Work-Family' Supervisor

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

Appendix B

OLS Coefficients standardized in Y for Work-to-family conflict (square root) (N=439)

	bStdY	bStdY	bStdY
Female	-0.02	0.05	0.04
Age (squared)	-0.00	-0.00	0.00
White	0.15	0.12	0.13
Ex/good health	-0.37*	-0.33**	-0.33**
Married/cohabiting	-0.24	-0.13	-0.11
Child(ren) < 18	0.14	0.20	0.20
Weekly elder care	0.12	0.05	-0.24
Supervisor 'work-family' support (squared)		-0.06***	-0.06***
Work hours		0.02***	0.02***
Work overload		0.22***	0.23***
Have flex (strongly agree) ¹		-0.39**	-0.60**
Have flex (slightly agree) ¹		-0.12	-0.21
Supportive work-family env. (strongly agree) ¹		-0.30*	-0.32**
Supportive work-family env. (slightly agree) ¹		-0.09	-0.11
Have flex (strongly agree) X Weekly elder care			0.48*
Have flex (slightly agree) X Weekly elder care			0.17

Note: a one-unit increase in X produces a (coefficient) standard deviation increase in Y.

² Reference group (Intermittent caregivers who 'slightly/strongly disagree' that they have access to flexibility.

*p<.05; **p<.01; ***p<.001

Chapter Three: A Mediational Model of Workplace Flexibility, Work-family Conflict, and Perceived Stress among Caregivers of Older Adults

Abstract

As an increasing number of employees become caregivers, the role of workplace resources in supporting caregivers has attracted the attention of researchers, employers, and policymakers. Workplace flexibility is one type of resource that has attracted particular interest, with research exploring whether flexibility (that is, giving employees some control over when and/or where work gets done) is related to important outcomes for both employees and employers. This investigation develops and tests a mediational model explicating the process through which workplace flexibility impacts caregiver well-being. Using a sample of 211 caregivers from the National Study of the Changing Workforce (2008), results show that work-to-family conflict mediates the relationship between perceived workplace flexibility and caregiver well-being. However, the mediational model is not supported for caregivers in fair/poor health, or when flexibility is operationalized as respondents' formal use of flexible work options.

Introduction

The ability of society to meet the challenges associated with an aging population—and to do so in a manner that honors and respects older adults—is dependent on ensuring the well-being of caregivers of older adults. Of the estimated 44.5 million people providing unpaid care to an older family member or friend, over 60 percent are currently working, with the vast majority doing so full-time (National Alliance of Caregiving & AARP, 2009). While caregiving can be a rewarding and positive experience (Fredriksen-Goldsen & Scharlach, 2001), it can also be a demanding one. In fact, the majority of employed caregivers of older adults report inter-role conflict in managing the demands of work and caregiving roles (Families and Work Institute, 2002).

For this reason, the stakeholders in the well-being of caregivers include the care recipients, the caregivers themselves, and employers. Inter-role conflict not only makes it difficult for caregivers to fulfill their caregiving and work responsibilities, it can also affect their well-being, as well as the quality of care they are able to provide. Inter-role conflict is associated with higher levels of stress, depression, and caregiving strain (Edwards, Zarit, Stephens, & Townsend, 2002; Marks, 1998). When caregivers are distressed, the likelihood that they will engage in behaviors that could harm the care recipient (e.g. psychological or physical mistreatment) increases (Beach, Schulz, Williamson, Miller, Weiner, & Lance, 2005).

There are also significant financial costs to businesses when employed caregivers experience inter-role conflict. Research has found that inter-role conflict is associated with work adjustments, such as being late for work, leaving early, extending a break or lunch, or being distracted on the job (Hepburn & Barling, 1996). Recent estimates

indicate that 68 percent of employed caregivers report making one or more work accommodations due to caregiving responsibilities (National Alliance of Caregiving & AARP, 2009). By the most conservative estimates, businesses lose over 17 billion dollars yearly due to costs associated with work accommodations and with the need to replace full-time employees who must leave the workforce because of elder care responsibilities. When cost estimates include part time workers and caregivers providing less intense care, the costs to businesses is over 33 billion dollars (MetLife Mature Market Institute & National Alliance for Caregiving, 2006). Research has indicated that providing flexible work options may reduce these costs, as workers with access to flexibility are more likely to remain employed, maintain their work hours, and have fewer absences or missed deadlines (Halpern, 2005; Pavalko & Henderson, 2006).

An increasing number of businesses are providing flexible work options (telecommuting, compressed workweeks, alternative schedules, etc.) to their employees (Families and Work Institute, 2008), giving them some control over where and when work gets done (Hill, Grzywacz, Allen, Blanchard, Matz-Costa, Shulkin, et al., 2008). While some research has explored the relationship between workplace flexibility and the well-being of caregivers of older adults, findings have been inconsistent (Barnett, Gareis, Gordon, & Brennan, 2009; Barrah, Shultz, Baltes, & Stolz, 2004; Chesley & Moen, 2006; Fredriksen-Goldsen & Scharlach, 2006; Pavalko & Henderson, 2006; Scharlach, Sobel, & Roberts, 1991). For example, while some studies have found access and/or use of workplace flexibility is associated with improved well-being (a reduction in caregiving concerns, or less inter-role conflict) other studies have found that workplace flexibility has no affect on caregiver well-being.

This study seeks to extend this line of research by exploring if the relationship between workplace flexibility and a caregiver's perceived stress is mediated by inter-role conflict. This exploration will facilitate the development of a process model explicating how workplace flexibility impacts caregiver well-being, ensuring that the flexibility provided to caregivers is truly what is needed.

Theoretical Framework

A majority of the research exploring the work-eldercare interface has been informed by role theory, introduced at a time of shifting economic, familial, and social roles. Goode (1960) theorized that occupying multiple roles and corresponding role obligations led to role strain; that is, the more roles one occupies, the more role strain experienced. However, later theorists, notably Marks (1977) and Sieber (1974), challenged this view and posited the role enrichment hypothesis, arguing that occupying multiple roles was actually beneficial (Doress-Worters, 1994). According to this perspective, occupying multiple roles enables individuals to develop additional social ties and to gain greater self-worth and satisfaction from having multiple role experiences and responsibilities, as well as gain access to additional flexibility (Bainbridge, Cregan, & Kulik, 2006).

However, as evidenced by studies exploring how employment impacts caregiver well-being, research has yielded conflicting results. Some studies have found that employed caregivers report more psychological strain than caregivers who are not employed, lending support for the role strain perspective (Lee, Walker, & Shoup, 2001), while findings from other studies comparing employed caregivers to their non-employed counterparts support the role enrichment perspective (Stephens & Townsend, 1997).

Then again, Cannuscio and colleagues (2004) found that employment in and of itself had no effect on caregiver outcomes—positive or negative.

Subsequently, role theorists have introduced the concept of inter-role conflict to explain these inconsistencies. According to Greenhaus & Beutell (1985) inter-role conflict occurs when the “pressures arising in one role are incompatible with pressures arising in another role” (p. 77). From this perspective, occupying multiple roles does not necessarily result in role strain. Rather, occupying multiple roles is only detrimental to individual well-being when inter-role conflict results. Research exploring how employment experiences differentially affect caregiver well-being supports this assumption. Numerous studies have found that it is the employment experiences that lead to inter-role conflict between caregiver roles and employee roles that negatively affect caregiver well-being (Fredriksen-Goldsen & Scharlach, 2006; Marks, 1998; Scharlach, Sobel, & Roberts, 1991; Stephens, Franks, & Atienza, 1997).

For example, Marks (1998) found that while caregivers¹³ reported significantly lower levels of well-being than non-caregivers, these differences could be explained by the fact that caregivers reported significantly higher levels of inter-role conflict, as controlling for inter-role conflict partially or fully mediated the relationship between caregiving status and well-being in most cases.¹⁴ Additionally, Stephens, Franks, and Atienza (1997) found a significant relationship between caregiving and work role

¹³ Caregiving status was not limited to those caring for older adults, as it was operationalized as whether the respondent “gave personal care for a period of 1 month or more to a family member or friend 18+ because of a physical or mental condition, illness, or disability” (p. 956). However, providing care to a parent was the most prevalent type of caregiving.

¹⁴ Marks utilized eight measures of well-being and examined each caregiving dyad individually.

demands. However, inter-role conflict fully mediated the relationship between employee role demands and depression and partially mediated the relationship between caregiver demands and depression. The finding that inter-role conflict fully or partially mediates the negative effects of caregiving might explain the inconsistent findings regarding the impact of employment on caregiver well-being. It is not employment status that predicts well-being, but the extent to which the employed caregiver experiences inter-role conflict. As theorized by Martire & Stephens, (2003), inter-role conflict is the “mechanistic process through which caregiving and work stress exert their harmful effects” (p. 169).

Work-family conflict has been conceptualized as a specific type of inter-role conflict that occurs when the role demands of a family role conflict with the role demands of an employee role, or vice versa. Work-family conflict¹⁵ is a bi-directional, micro-level theory that is applied to employees with family roles and responsibilities (such as caring for a parent). An individual is said to experience work-to-family conflict when the demands of the work role make it difficult to meet the demands in a family role. Conversely, when the demands of a family role make it difficult to meet the demands in the work role, an individual will experience family-to-work conflict. The general construct work-family conflict comprises both work-to-family conflict and family-to-work conflict, though work-to-family and family-to-work conflict are typically

¹⁵ One of the methodological challenges in the work-family area of study is the lack of construct clarity.

Work-to-family and family-to-work are two of nearly a dozen constructs used in the literature to define the experience of inter-role conflict between work and family domains (Dilworth, 2004).

conceptualized and measured separately.¹⁶ The extent of the work-family conflict (if any exists) will be a function of the degree to which work and family role demands interfere with one another, consistent with the premise of inter-role conflict.

This interference may be time-based, behavior-based, or strain-based. Time-based work-family conflict occurs when temporal obligations in one role interfere with role performance in the other role (e.g. an important meeting that runs over interferes with the need to pick up a parent from an adult day center). Strain-based work-family conflict occurs when the role demands of one role diminish an individual's ability to meet the role demands in the other role (e.g. disrupted sleep from an agitated family member with Alzheimer's makes it difficult for an individual to remain alert and focused at work). Behavior-based work-family conflict results when the behavioral expectations in one role are contrary to the expectations in the other role (e.g. an aggressive defense attorney finds she relates poorly to her family during trials). The theory predicts that the experience of work-family conflict leads to psychological, emotional and/or physical strain, negatively affecting individuals' well-being and causing diminished role performance and/or role satisfaction in one or more roles (Greenhaus & Beutell, 1985).

Literature Review

The impact of workplace flexibility on both employers and employees has been of interest to researchers (Swanberg, Kanatzar, Mendiondo, & McCoskey, 2006). In a recent

¹⁶ While both are forms of inter-role conflict, measuring them separately provides the opportunity to identify possible leverage points for introducing interventions to reduce inter-role conflict. For example, if the inter-role conflict is primarily work-based, then work-based interventions would be most appropriate in alleviating it.

review of the research on flexibility, Kossek and Michel (2010) identify two distinct approaches that are used to operationalize flexibility: perceived flexibility and access and/or use to formal policies. Perceived flexibility, a more subjective measure, is conceptualized as a “job design feature that refers to an individual’s perceived level of flexibility” and is typically measured “using Likert scales to assess the degree of perceived flexibility and control concerning the timing of their work” (p. 548). Conversely, access and/or use of formal policies, a more objective measure, is conceptualized as “involving a formal human resource policy or informal supervisory approved work practice” (p. 548). This type of flexibility is typically measured dichotomously (whether one has access to and/or uses a specific flexible work option) or as an index (total number of flexible work options one has access to and/or uses).

A number of studies on general employee populations have found that both perceived flexibility and objective measures of workplace flexibility are associated with improved employee well-being as well as decreased inter-role conflict (Breugh & Frye, 2008; Grzywacz, Carlson, & Shulkin, 2008; Voydanoff, 2004). Other studies have found that workplace flexibility has no effect on measures of well-being (Breugh & Frye, 2008; Mesmer-Magnus & Viswesvaran, 2006).

Studies with samples limited to caregivers of older adults have also yielded inconsistent results. Barnett, Gareis, Gordon, and Brennan (2009) found access to workplace flexibility was negatively related to levels of caregiving concerns. Barrah, Shultz, Baltes, and Stolz (2004) found perceived flexibility was negatively related to inter-role conflict for women (but not for men). Other studies have not workplace flexibility to have little or no association with employee well-being (Fredriksen-Goldsen

& Scharlach, 2006; Pavalko & Henderson, 2006; Scharlach, Sobel, & Roberts, 1991). Fredriksen-Goldsen and Scharlach (2006) found that workplace resources (perceived flexibility and perceived workplace support) were negatively related to caregiving strain among employed men and women providing familial assistance to an adult with a health problem or disability. However, they note that the overall contribution of workplace resources in explaining variation in caregiving strain was minimal. Pavalko and Henderson (2006) found that access to workplace flexibility (flexible scheduling, family leave, paid sick days, and vacation days) had no effect on the levels of distress of female caregivers.

The literature on objective measures of workplace flexibility has noted that measuring employees' *access* to workplace flexibility, rather than their *use* of flexibility may be a limitation. Studies have evidenced that perceptions of supervisor, work team, and organizational support for working flexibility influence employees' decisions about whether or not to do so (Breugh & Frye, 2008; Thompson, Beauvais, & Lyness, 1999). For example, an organization may allow employees to work an alternative schedule, but employees with supervisors who do not fully support this arrangement may feel that they cannot utilize this resource (Eaton, 2003). However, research that has operationalized objective workplace flexibility as actual use of policies has yielded results similar to studies relying on access to flexibility. Chesley and Moen (2006) found that the use of vacation time, personal time off, or telecommuting did not mitigate the distress of employed wives caring for an adult who was elderly, had a chronic illness, or was disabled.

While it is not clear why studies have failed to consistently find an association between workplace flexibility and well-being among caregivers of older adults, a plausible explanation is that they had no effect on reducing inter-role conflict, and thus no effect on well-being. The findings of one study (Neal & Hammer, 2007) that investigated the relationships between workplace flexibility, inter-role conflict (work-to-family conflict and family-to-work conflict), and caregiver well-being generally supports the assumption that work-family conflict mediates the relationship between workplace flexibility and caregiver well-being, though only direct relationships were explored. Neal and Hammer (2007) investigated the effect of workplace flexibility (the mean number of the availability and utilization of flexible work hours, job-sharing, and telecommuting) on both inter-role conflict and caregiver well-being. For women,¹⁷ use of alternative work schedules was not related to work-to-family conflict or family-to-work conflict or to any of the four measures of well-being (depression, life satisfaction, overall health, and overall role performance). Given that there was no relationship between alternative work schedules and either form of role conflict, it is not surprising that this resource had no impact on caregiver well-being. Kossek and Michel (2010) also theorize that “one likely pathway between flexible schedule use and higher well-being...is lower work-family conflict” (p. 554).

The findings of three recent studies provide empirical support that the work-family interface is a mediating mechanism between workplace flexibility and important

¹⁷ For men, workplace flexibility was related to higher family-to-work conflict. The authors posit that “It is possible that the use of alternative work schedules frees up time that then is filled with additional family responsibilities” (Neal & Hammer, 2007, p. 164).

work and family outcomes. McNall, Masuda, and Nicklin, (2010) found work-to-family enrichment mediated the relationship between flexible work arrangements (access to flexibility in when starting/ending work and access to a compressed workweek) and both job satisfaction and intent to turnover. Carlson, Grzywacz, and Kacmar (2010) found that employees with some control over the time work began and ended (around a set of core hours), reported significantly lower work-to-family conflict than employees with little flexibility over when their work began and ended. Schedule flexibility was also associated with family performance, job satisfaction, and family satisfaction. Finally, work-to-family conflict (together with work-to-family enrichment) fully mediated the relationship between schedule flexibility and job satisfaction, as well as between schedule flexibility and family performance. Jang (2009), using a sample of working parents, found that perceptions of workplace flexibility was negatively associated with work-family conflict, which in turn, was negatively associated with well-being.

However, Jang did not specifically test for mediation between workplace flexibility and well-being and none of these three studies were limited to caregivers of older adults. Caring for older adults can be unpredictable, as older adults' caregiving needs can quickly and unexpectedly change. One study exploring episodic crises in caring for an older adult found that nearly half of caregivers reported at least one crisis episode in the previous six months (Sims-Gould, Martin-Matthews, & Gignac, 2008). The vast majority of these crises were related to the deteriorating health of the care recipient. Caregivers may need to provide additional support to the care recipient both during and after these acute crisis situations. The needs and experiences of employed caregivers of older adults are certainly different from those of general employee

populations, or even those limited to employees caring for children. For this reason, identifying the process through which workplace flexibility can support caregivers of older adults is a critical area of inquiry.

Ultimately, the research to date indicates that access to and/or use of workplace flexibility does not necessarily result in improved well-being among caregivers of older adults. If, as posited, inter-role conflict is indeed the “mechanistic process through which caregiving and work stress exert their harmful effects” (Martire & Stephens, 2003, p. 169) workplace flexibility will only be effective to the extent that it alleviates inter-role conflict among employed caregivers of older adults (Martire & Stephens, 2003).

The following conceptual model is proposed (Figure 1).

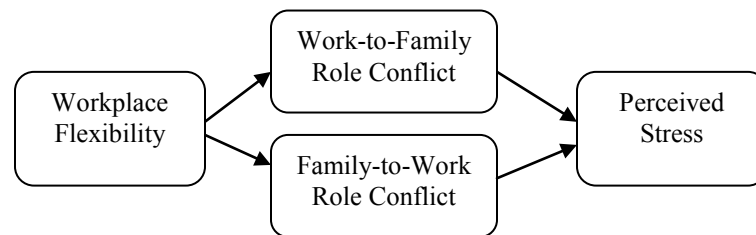


Figure 1. Conceptual Model of Workplace Flexibility and Caregiver Stress

Hypotheses and Research Questions

To empirically test this conceptual model, the following hypotheses are proposed:

H1: Work-to-family and family-to-work conflict will mediate the relationship between workplace flexibility and stress (if a relationship between workplace flexibility and stress exists).

As recommended by MacKinnon (2008) the presence of mediated moderation and/or moderated mediation will be evaluated to ensure this mediating model is consistent among caregivers of different genders, ages, races, and health statuses. Therefore the following research questions (RQ) are proposed:

RQ1: Is the effect of work-family conflict on stress statistically similar among caregivers of different genders, ages, races, and health statuses?

RQ2: Is the effect of workplace flexibility on stress statistically similar among caregivers of different genders, ages, races, and health statuses?

Methodology

Sample

This project utilizes cross-sectional data from the 2008 National Study of the Changing Workforce (NSCW), a repeated cross-sectional design national survey of the United States labor force that is collected every five years since 1992. For the 2008 wave, Harris Interactive conducted 3,502 interviews between November 2007 and April 2008 using computer-assisted telephone interviewing. Interviews lasted approximately 50 minutes. The un-clustered random probability sample (stratified by region) was generated by random-digit-dial methods and limited to non-institutionalized adults (18+) working a paid job or operating an income producing business (in the civilian labor force) and living

within the 48 contiguous states.¹⁸ In households with more than one eligible person, one was selected randomly to be interviewed. The response rate was 54.6 percent.

Interviewers initially offered a cash honorarium of \$25 as incentives and if refused, a higher amount (\$50) was offered. Of the 3,502 participants, there are 2,769 wage and salaried workers who work for someone else,¹⁹ 512 of who report that they are currently providing special care or attention to a relative 65 years of age or older. Of this sample, 211 (130 female) report providing care on a weekly basis and 301 (166 female) report doing so intermittently, as special needs arise. The analytic sample will be limited to the 211 respondents who report providing care on a regular, weekly basis to a relative 65 years of age or older.

Measures

Perceived stress. Caregiver stress was operationalized using the Four Item Perceived Stress Scale²⁰ (Cohen, Kamarck, & Mermelstein, 1983). For the Perceived Stress Scale, respondents were asked the frequency (1 'Never' to 5 'Very Often') in which they felt stressed and overwhelmed in their personal lives. A low Cronbach's alpha for this scale (.62) led to the decision to modify this scale. First, the reverse coded, "How often have you felt confident about your ability to handle your personal problems" was removed from the scale, as the scale reliability improved with its removal. In its place, an

¹⁸ The sample was weighted by sex, race, educational status, and age to the March 2007 Current Population Survey to adjust for any sampling bias that might have occurred.

¹⁹ Excluding independent contractors and business owners.

²⁰ See Appendix A for items included in this scale.

item from the 10-item²¹ Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) was added, yielding a Cronbach's alpha of .73. Finally, the reverse coded "How often have you felt that things were going your way" was also removed from the scale, as Cronbach's alpha improved to .77 with its removal. The mean of the three remaining items was used to create the scale. The final items that comprised the scale is found in Appendix A.

Workplace flexibility. Workplace flexibility was operationalized in two ways, as respondents' subjective perceptions of their workplace flexibility and their self-reported use of flexible work options. First, perceived flexibility was operationalized as a scale of three items inquiring about the extent the respondent has control over work hours and the flexibility to meet family needs as they arise. Items include: "Overall, how much control would you say you have in scheduling your work hours – complete control, a lot, some, very little, or none?" How hard is it for you to take time off during your work day to take care of personal or family matters – very hard, somewhat hard, not too hard, or not at all hard? and "I have the schedule flexibility I need at work to manage my personal and family responsibilities" (1 'Strongly Agree' to 4 'Strongly Disagree'). Items were reverse coded as appropriate so that a higher score was indicative of a higher degree of flexibility. Because the items had different anchors, standardized scores were computed and the mean of these items was used to form the scale. Informal workplace flexibility was negatively skewed, though no transformations improved the distribution, so it was also not transformed. The Cronbach's alpha of the scale for the analytic sample is .64.

²¹ The survey included the four questions from the four-item Perceived Stress Scale as well as this one additional item from the 10-item Perceived Stress Scale.

Workplace flexibility was also operationalized as an index of participants' use of formal flexible work options. Participants received one point for each of the following flexible work option that they report utilizing: working an alternative schedule, changing start and quit times on short notice, compressing the work week, teleworking (working from home or another off-site location), and using vacation days.²² Cases were dropped if data was missing for more than one flexible work option, leading to the removal of two cases. Eight cases were missing data for one flexible work option. The mean of the index was taken in order to preserve the eight cases missing data for one flexible work option (for these cases, the mean of the four options they had data for was used). This measure was normally distributed. Table 2 reports the proportions of caregivers having access to, and using each flexible work option.

Sex. Respondents indicated their gender as either male or female. To create a dichotomous variable, females were coded as 1 and males were coded as 0.

Age. Respondents indicated their age in years. Responses ranged from 19 to 82 years of age. Data were missing for two respondents who were removed from the analysis. While age was slightly positively skewed it was not transformed, as there was only minimal improvement when doing so.

Health status. Respondents were asked to rate their overall health as either 'Excellent,' 'Good,' 'Fair,' or 'Poor.' Due to the small number of respondents (7) reporting poor health, respondents reporting excellent or good health were coded as 1 and

²² While not traditionally seen as a flexible work option, research has indicated that employed caregivers frequently use vacation days to meet caregiving responsibilities (Brown, 2010).

respondents reporting fair or poor health were coded as 0. This coding strategy is well established in research on health and well-being (Chen, Martin, & Matthews, 2006).

Race. Respondents were asked to identify their race as White; Black or African American; Asian, Pacific Islander, or Indian; or Other, including mixed. Data was missing for three respondents who were removed from the analysis. Due to small sample sizes, respondents who identified themselves as White were coded as 1 and respondents who identified as another race were coded as 0.

Work-to-family conflict. Work-to-family conflict was operationalized using a scale comprised of five items asking about the frequency (1 ‘Never’ to 5 ‘Very Often’) in which participants experienced time-based and strain-based work-to-family conflict in the past 3 months. Sample items²³ include: “How often have you NOT had enough time for your family or other important people in your life because of your job?” and “How often has work kept you from doing as good a job at home as you could?” To create a scale, items were first reverse coded so that higher scores were indicative of greater spillover between domains. The mean of the five items was used to form the scale and in the case of one participant, the mean of four items was used to form the scale (data was missing for one item). This measure was normally distributed. The Cronbach’s alpha for the analytic sample was .86. All items that comprised the scale can be found in Appendix A.

Family-to-work conflict. Family-to-work spillover was operationalized using a scale comprised of five items asking about the frequency (1 ‘Never’ to ‘Very Often’) in which participants experienced time-based and strain-based family-to-work conflict.

²³ See Appendix A for all items that comprised the scale.

Sample items²⁴ include: “How often have you NOT had enough time for your family or other important people in your life because of your job?” and “In the past three months, how often has your family or personal life drained you of the energy you needed to do your job?” This measure was normally distributed. To compute the scale, the mean of each of the five items was taken. The Cronbach’s alpha for the analytic sample is .82. All items that comprised the scale are listed in Appendix A.

Analytic Strategy

Data was managed and analyzed using STATA 11.0 IC. Since the independent variable of interest—workplace flexibility—was operationalized in two ways, two mediational models will be tested. Mediation will be tested following the procedure outlined by Baron and Kenny (1986).²⁵ The first step requires that a relationship between the independent variable (workplace flexibility) and the dependent variable (perceived stress). In the second test, a separate regression model must demonstrate a relationship

²⁴ See Appendix A for all items that comprised the scale.

²⁵ A number of limitations of the Baron & Kenny method have been noted in the literature (Preacher & Hayes, 2008). Criticisms includes low power, increased likelihood of a Type 1 error, and an inability to determine if the indirect effect is significantly different from zero and in the expected direction. An alternative approach to testing for mediation, known as the Sobel test, has been used in place of or in addition to the Baron & Kenny method. One of the advantages of the Sobel test is that allows for the calculation of the indirect effects. However, this procedure is most appropriate for large samples, as it requires a normal sampling distribution. When this is not the case, bootstrapping estimation is the preferred estimation procedure for determining the significance of the indirect effect(s). Appendices B, D (perceived flexibility) and F (use of flexibility) present the results of these supplementary analyses. The findings from these analyses are consistent with the results obtained using the Baron and Kenny method.

between the mediator(s) (work-to-family conflict and family-to-work conflict) and the independent variable. In the third step, the outcome variable is regressed on both the mediator and independent variable in the same model. Complete mediation is established if, while controlling for the mediator, the independent variable is no longer significantly related to the outcome variable. Partial mediation is established when the effect of the independent variable on the outcome variable is reduced.

Note: Though family-to-work conflict was significantly associated with perceived stress ($p < .001$), no association between family-to-work spillover and either measure of workplace flexibility was found (Step 2), analyses were only conducted using work-to-family conflict as a mediator.

Missing Data

From the full sample of 211 cases, three cases were removed because of missing data for race and two cases were removed because of missing data for age. An additional two cases were removed due to missing data or more than one flexible work option, yielding a final analytic sample of 204. Overall, this represents a total of 3 percent of cases lost due to listwise deletion.

Results

Descriptive Statistics

Table 1 reports the descriptive statistics for the sample of 204 caregivers. The majority of caregivers are female (61%), married (57%), and just over a third report that they have a child under the age of 18 living at home with them. On average, caregivers provide 13 hours of care a week. Table 1 also compares the characteristics of the NSCW sample to a national sample of caregivers (not limited to employees) caring for adults age

50 and over collected by the National Alliance of Caregiving and AARP. In general, the samples are quite similar, with the exception that one hundred percent of the participants in the NSCW are employed, compared to 61 percent from the study conducted by the National Alliance of Caregiving and AARP.

Table 1

Characteristics of NSCW Sample Compared to National Sample of Caregivers

Characteristic	NSCW Sample ¹ (N=204)	National Sample ² (N=1397)
Female	63%	67%
Age (mean)	49 years	50 years
White	82%	76%
Currently employed	100%	61%
Married or cohabiting	57%	64%
Children <18 in home	34%	32%
Hrs care week (mean)	13 hours	19 hours

¹ Actual proportions of unweighted data. Multivariate analyses were conducted with data weighted by sex, race, educational level, and age based on the March 2007 Current Population Survey.

² Caregivers of adults 50+ (average age of care recipient: 77). National Alliance for Caregiving & AARP, 2009

Table 2 reports the percentages of respondents who have access to each type of flexible work option, and the percentage who report using flexible work options. The most common flexible work option that respondents reporting having access to was the ability to change work hours on short notice. Of the 82 percent with access to this option, 69 percent reported actually using this option. Conversely, less than 20 percent of participants had access to telework and only 12 percent reported doing so.

Table 2

Percentages of Caregivers Reporting Access to and Use of Flexible Work Options

(N=204)

Type of Flexible Work Option	% Access	% Use
Alternative Schedule	47%	37%
Change Work Hours on Short Notice	82%	69%
Compress Workweek	34%	16%
Telework	17%	12%
Vacation Days	74%	58%

The means and standard deviations of all study variables are found in Table 5 and the correlations of study variables are found in Table 4.

Table 3

Means and Standard Deviations

Variable	Mean (SD)
Perceived Flexibility Scale (standardized)	.01 (.74)
Unstand. Item: Control work hours	2.99 (1.41)
Unstand. Item: Difficulty time off	2.81 (1.07)
Unstand. Item: Flex need manage fam. Needs	3.18 (.99)
Use of Flexibility Index	.39 (.24)
Work-to-family conflict	2.72 (.90)
Perceived stress	2.80 (1.07)
Age	49.06(9.44)
Female	.63
Excellent/Good health	.77
White	.82

Table 4

Correlations of Variables

Measure	Use of flex	WF conflict	Stress	Age	Female	Health	White
Perceived flex	.37***	-.45***	-.31***	.13	.06	.10	.06
Use of flex		-.04	-.19*	.14*	-.04	.08	.07
W-F conflict			.44***	-.10	-.06	-.11	-.11
Stress				-.25**	.12	-.26***	-.18**
Age					.06	.15*	.22**
Female						-.16*	.01
Health							.16*

* $p < .05$; ** $p < .01$; *** $p < .001$ **Mediation Analyses**

Perceptions of workplace flexibility and perceived stress. The first set of analyses tested for mediation between perceived workplace flexibility and perceived stress (Table 5). Steps one and two of the Baron & Kenny method were supported, as perceptions of workplace flexibility were significantly and negatively related to perceived stress ($p < .001$) as well as work-to-family conflict ($p < .01$). In the final step, perceived stress was regressed on perceptions of workplace flexibility, work-to-family conflict, and the covariates (age, gender, health status, and race).

Table 5

Unstandardized OLS Coefficients for Perceived Stress (N=204)^a

	Unstand. Coefficients (SE)	Unstand. Coefficients (SE)	Unstand. Coefficients (SE)
Perceived Flex	-.42(.11)***	-.25(.15)	.14(.21)
Age	-.03(.01)**	-.025(.01)**	-.02(.01)**
Female	.20(.17)	.26(.16)	.25(.16)
Ex/good health	-.45(.21)*	-.34(.22)	-.39(.20)
White	-.48(.21)*	-.46(.22)*	-.43(.21)*
Work-to-family conflict		.36(.12)**	.60(.14)***
Work-to-family conflict X Female			-.40(.17)*
Perceived Flex X Exc/good health			-.50(.23)*
R ²	.30	.36	.40

*p<.05; **p<.01; ***p<.001

^a Controlling for marital status, presence of children under 18, and number of hours providing elder care does not significantly alter the results. When including these three variables, race approaches significance in each of the three models (p<.10). Of these three variables, only marital status is significantly associated with perceived stress, and this effect is only found in the first model.

Results support hypothesis 1, as work-to-family conflict fully mediated the relationship between perceived stress and perceptions of workplace flexibility. Work-family conflict was significantly and positively associated with perceived stress. Age and race were significant covariates. Being white was associated with lower levels of perceived stress and increases in age were associated with lower levels of perceived stress. Next, the presence of moderated mediation and mediated moderation was evaluated. To test for moderated mediation, interaction terms between work-to-family conflict and each of the covariates were tested. A significant interaction between work-

to-family conflict and gender was found. The association between perceived flexibility and stress was mediated by work-to-family conflict for both men and women (See Appendix C for the regression model using males as a reference group). However, work-to-family conflict had a stronger effect on perceived stress for males, as compared to females (Figure 2).

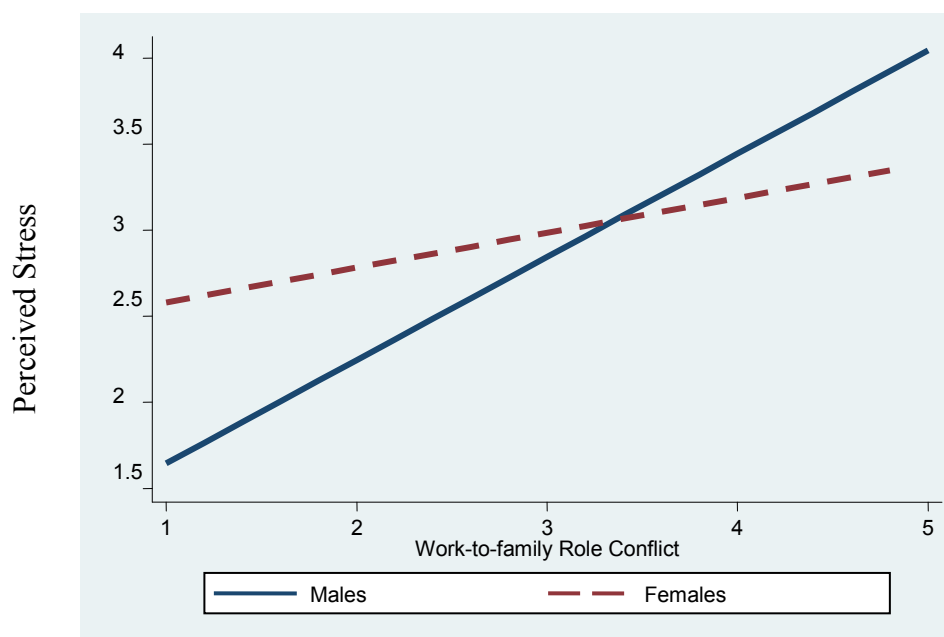


Figure 2. Gender as a moderator of the work-to-family role conflict-perceived stress relationship among caregivers of older adults. Predicted values are calculated when all other variables in the model are equal to zero.

To test for mediated moderation, interaction terms between perceived flexibility and each of the covariates were tested. A significant interaction between perceived flexibility and health status was found. Additional analyses were conducted to explore the implication of this significant interaction on the mediation of perceived flexibility and stress (Appendix E). Mediation of perceived flexibility and stress were not supported for

those in fair/poor health, as no association between perceived flexibility and stress was observed for this group of caregivers. Support for partial mediation was found for those in excellent/good health. When controlling for work-to-family conflict the effect of perceived flexibility is reduced, but remains significant. The association between perceived flexibility and stress for those in excellent/good health, as compared to those in fair/poor health (controlling for work-to-family conflict, gender, age, and race) can be seen in Figure 3.

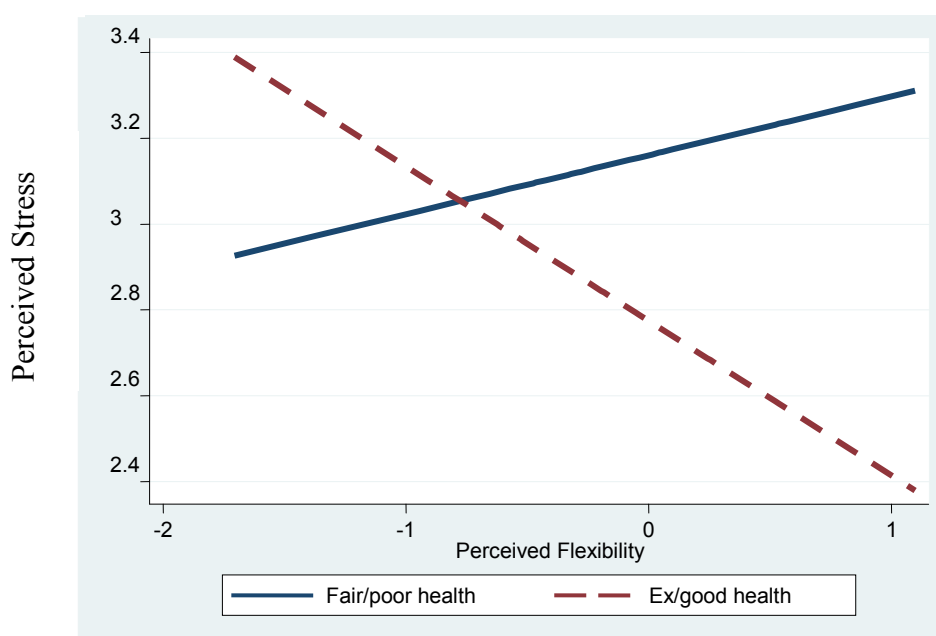


Figure 3. Health status as a moderator of the perceived flexibility-perceived stress relationship among caregivers of older adults. Predicted values are calculated when all other variables in the model are equal to zero.

Use of workplace flexibility and perceived stress. The second set of analyses tested for mediation between use of workplace flexibility and perceived stress (Table 6). Step one of the Baron and Kenny method was supported, as use of workplace flexibility was significantly and negatively associated with perceived stress ($p < .05$), though step

two was not supported, as use of workplace flexibility was not associated with work-to-family conflict. The finding that mediation was not occurring was supported by the Sobel test and bootstrapping methods, as work-to-family role conflict was not found to be a significant mediator of the association between use of workplace flexibility and perceived stress (Appendix G). These results do not support Hypothesis 1. The results of the hierarchical regression analyses can be found in Table 6.

Table 6

Unstandardized OLS Coefficients for Use of Workplace Flexibility (N=204)

	Unstand. Coefficients (SE)	Unstand. Coefficients (SE)	Unstand. Coefficients (SE)
Use of Flex	-.42(.11)*	-.71(.32)*	-.70(.67)
Age	-.02(.01)*	-.02(.01)*	-.02(.01)*
Female	.16(.18)	.26(.17)	.26(.16)
Ex/good health	-.44(.23)	-.30(.23)	-.41(.21)*
White	-.49(.23)*	-.44(.23)	-.43(.22)*
Work-to-family conflict		.43(.09)***	.65(.12)***
Work-to-family conflict X Female			-.37(.17)*
Use of Flex X Exc/good health			-1.70(.73)*
R ²	.25	.36	.40

*p<.05; **p<.01; ***p<.001

^a Controlling for marital status, presence of children under 18, and number of hours providing elder care does not significantly alter the results. When including these three variables, race approaches significance in each of the three models (p<.10). Additionally, while health status approaches significance in the first model (p=.06), it is significant in the first model when controlling for marital status, presence of children under 18, and hours of elder care (p<.05). Of these three variables, only marital status is significantly associated with perceived stress, and this effect is only found in the first model.

In the final model, work-to-family conflict was significantly and positively related to perceived stress. Significant covariates included age, health status and race. In the final model, White caregivers reported lower stress, as compared to caregivers of other races. Older caregivers reported less stress than younger caregivers. There were also significant interactions between work-to-family conflict and gender and between use of workplace flexibility and health status. As before, work-to-family conflict had a stronger effect on perceived stress for men as compared to women. Additionally, as shown in Figure 4,

while increases in the use of workplace flexibility were associated with decreases in perceived stress for those in excellent or good health, this effect is not found for those in fair/poor health.

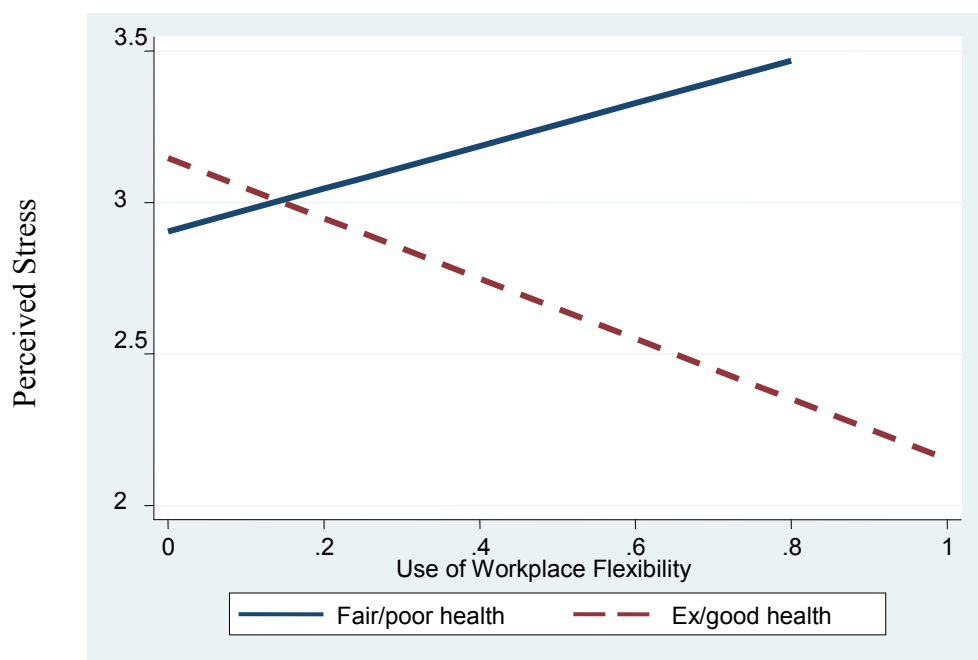


Figure 4. Health status of a moderator of the use of workplace flexibility-perceived stress relationship among caregivers of older adults. Predicted values are calculated when all other variables in the model are equal to zero.

While increases in flexibility appear to increase stress among those in fair/poor health (controlling for age, gender, race, and work-to-family conflict) this association is not statistically significant ($p=.83$). A power analysis (Soper, 2010) indicated that with a sample size of 48, power to detect an effect at $p<.05$ was .68, less than the minimum of .8 recommended. However, there was nearly enough power (.79) to detect an effect at $p<.10$ and more than enough (.89) to detect an effect at $p<.20$.

Discussion

While the meditational hypothesis was only partially supported, the overall findings of this study advance this area of research in three important ways. First, they demonstrate that different measures of flexibility can yield different results, even within the same sample. Second, they indicate that the relationship between workplace flexibility and well-being among caregivers may not necessarily be a direct one. Third, they show that workplace flexibility and work-to-family conflict do not affect all caregivers in the same way.

Perceived flexibility and use of flexibility, while significantly related ($r=.37$; $p<.001$) had differential effects on work-to-family conflict. Perceived flexibility was significantly associated with work-to-family conflict; objective use of flexible work options was not. While the latter is somewhat surprising, it is possible that those using the most flexible work options had the greatest work-to-family conflict to begin with, and that the use of these options did provide some benefit. There is some support for this in this investigation and in prior research. In this study, when work-to-family conflict was controlled for, the use of flexible options was associated with lower levels of stress. Fredriksen-Goldsen and Scharlach (2001) found that while nearly all employees who adjusted their work schedules to fit family responsibilities reported the opportunity to do so as ‘helpful’ or ‘very helpful,’ these employees also reported greater role strain than those who had not adjusted their schedules, leading the authors to speculate that “Accommodations such as changing one’s work schedule may not occur until employees experience substantial amounts of strain” (p. 124).

That different measures of flexibility had differential effects on work-to-family conflict may help explain why the research on flexibility and well-being has been inconclusive. If work-to-family conflict had been the only outcome measure, a study defining flexibility as perceived flexibility would find that workplace flexibility benefits caregivers by reducing work-to-family conflict. Using the same sample and the same outcome measure, a study defining flexibility as use of flexible work options would find that flexibility had no effect on work-to-family conflict among caregivers. Ultimately, conflicting findings regarding the relationship between flexibility and well-being among caregivers may be attributable to differences in how studies operationalize flexibility.

The findings of the mediational analyses indicate that perceived flexibility affects caregivers' stress via work-to-family conflict, though this was not found to be the case with use of flexible work options. These findings are exactly in line with the construct of flexibility fit:

Most studies on flexibility...have examined the availability or utilization of different flexible work options assuming a 'more is better' perspective. This perspective overlooks the concept of fit. For example, an organization may offer a wide range of flexible work options, but if these options do not meet the needs of the workers, then they are ineffective. We operationalize flexibility fit as respondents' subjective assessment of the degree to which the flexibility afforded to them at their workplace meets their needs (Pitt-Catsouphe & Matz-Costa, 2008, p. 220).

This concept may also help explain why workplace flexibility is operationalized as the number of flexible work options a respondent had access to and utilized (e.g. ‘more is better’) was not associated with work-family conflict.²⁶

It is also noteworthy that flexible work options and work-to-family conflict have differential impacts on caregivers. Work-to-family conflict is more strongly associated with perceived stress among male caregivers as compared to female caregivers. In addition, flexible work options do not seem to have the same benefits for those in fair/poor health as they do for those in good/excellent health. It is possible that caregivers struggling with their own health issues need additional support to lower their levels of perceived stress. These findings may also help explain conflicting findings in this area of research. Previous studies failing to find a positive relationship between workplace flexibility and well-being may have included a substantial number of caregivers in fair/poor health.

Limitations

The National Study of the Changing Workforce is characterized by a strong sampling design, reliable data collection methods, and high response rates. However, there are a number of limitations that should be noted. First, since this investigation utilized cross-sectional data, causal relationships between variables cannot be established.

²⁶ Another possibility is that the processes through which workplace flexibility impacts caregiver well-being may operate differently, depending on what types of flexibility are being evaluated. For example, in terms of use of flexible work options, higher levels of inter-role conflict may drive use of flexible work options. Caregivers with the greatest family demands may use flexible work options as a strategy to minimize inter-role conflict as much as possible.

Therefore, the findings of the meditational analyses should be considered exploratory, rather than explanatory.

A second limitation concerns the measures. The alpha reliability for perceived flexibility was marginally acceptable at .64, so a stronger measure of perceived flexibility would strengthen the study. Another limitation is the lack of a measure of caregiving demands. While controlling for number of caregiving hours a week to not change the analyses, hours of caregiving is not necessarily indicative of caregiving demands.

A third limitation is the sample size. Due to the limited number of caregivers of color, all were collapsed into the same reference group, prohibiting important comparisons among caregivers of different races and ethnicities. Similarly, caregivers in fair health may differ from caregivers in poor health in important ways, though these two groups were also collapsed together in order to facilitate the overall analyses. A larger sample size would have allowed for sub-group comparisons as well.

Future Research

The findings of this investigation highlight a number of areas for future research. It was surprising to find that older caregivers reported less stress than younger caregivers, as research (albeit not limited to employed caregivers) has generally found the reverse. Similarly, there was no association between gender and perceived stress, whereas research has generally found that female caregivers report greater strain than their male counterparts (Majerovtitz, 2007; Montgomery, Rowe, & Kosloski, 2007; Neal & Hammer, 2007). Future research should explore if the socio-demographic factors associated with caregiver strain differ among employed vs. non-employed caregivers.

In addition, longitudinal analyses of employed caregivers are necessary in order to explicate the relationships between perceived workplace flexibility, objective use of workplace flexibility, inter-role conflict, and caregiver well-being. Future research endeavors could design intervention studies in order to discern which types of flexibility affect which outcomes, and why. These investigations will facilitate the development of a process model explaining how workplace flexibility can alleviate caregiver stress, ensuring that the flexibility provided to caregivers are truly what they need to manage both caregiving and work roles effectively.

Finally, it is concerning that perceived flexibility and use of flexible work options did not appear to benefit caregivers in fair/poor health. Greater attention should be paid to caregivers who report health issues of their own. Future research could explore the experiences of this sub-sample of employed caregivers in order to determine what resources might support them in managing their work and caregiving demands.

Conclusion

By 2030, when people aged 65 or older comprise nearly 20 percent of the population, an unprecedented number of older adults will need care and assistance (Himes, 2002). As late middle age adults (51-56) currently report poorer health than their counterparts did 12 years previously (Soldo, Mitchell, Tfamily, & McCabe, 2006), it is likely that older adults will continue to require as much, if not more care than is currently provided to older adults. If current trends continue, family caregivers will continue to provide the vast majority of the care given to older adults (O'Toole, 2002). As the majority of these caregivers will also be employed, it is imperative to discern what resources these caregivers most need to support them in managing multiple role demands.

Though more research is needed, the evidence to date indicates that work-based resources like workplace flexibility can support employed caregivers. Further research should also explore the role community-based resources in supporting employed caregivers.

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Appendix A

Measurement of Constructs

Perceived Stress Scale

In the last month...?

1. Never
 2. Almost never
 3. Sometimes
 4. Fairly Often
 5. Very Often
1. How often have you felt nervous and stressed?
 2. How often have you felt that you were unable to control the important things in your life?
 3. How often have you felt that difficulties were piling up so high that you could not overcome them?

Work-to-family Conflict

Over the past 3 months...?

1. Very Often
 2. Often
 3. Sometimes
 4. Rarely
 5. Never
1. How often have you NOT had enough time for your family or other important people in your life because of your job?
 2. How often have you NOT had the energy to do things with your family or other important people in your life because of your job?
 3. How often has work kept you from doing as good a job at home as you could?
 4. How often have you NOT been in as good a mood as you would like to be at home because of your job?
 5. How often has your job kept you from concentrating on important things in your family or personal life?

Family-to-work Conflict

Over the past 3 months...?

1. Very Often
 2. Often
 3. Sometimes
 4. Rarely
 5. Never
-
1. How often have you NOT been in as good a mood as you would like to be at work because of your personal or family life?
 2. How often has your family or personal life kept you from doing as good a job at work as you could?
 3. In the past three months, how often has your family or personal life drained you of the energy you needed to do your job?
 4. How often has your family or personal life kept you from concentrating on your job?
 5. How often have you not had enough time for your job because of your family or personal life?

Appendix B

Supplemental Mediation Analyses of Perceived Flexibility and Stress using Sobel and Bootstrapping Tests²⁷*Sobel and Goodman Tests*

Mediation Test	Coefficient (SE)	z-score
Sobel	-.23 (.05)	-4.22***
Goodman-1	-.23 (.05)	-4.19***
Goodman-2	-.23 (.05)	-4.24***

***p<.001

Percentile and Bias-corrected bootstrap results for Sobel: 1000 replications

Indirect effect	Coefficient (SE)	Bias	<u>95% Bias-corrected confidence interval</u>	
			Lower CI	Upper CI
Perceived flexibility	-.23(.06)	.0007	-.35	-.13

Note: Confidence intervals containing zero are interpreted as non-significant.

²⁷ These analyses were conducted with unweighted data, as STATA did not allow weights when using the Sobel or bootstrapping tests.

Appendix C

Supplemental Analyses of Interaction between Work-to-family Conflict and Sex

Unstandardized OLS coefficients with Males as Reference Group

	Unstand. Coefficients (SE)
Perceived Flex	.14(.21)
Age	-.02(.01)**
Male	-.25(.16)
Ex/good health	-.39(.20)
White	-.43(.21)*
Work-to-family conflict	.20(.16)
Work-to-family conflict X Male	-.40(.17)*
Perceived Flex X Ex/good health	-.50(.23)*
Adjusted R2	.40

*p<.05; **p<.01; ***p<.001

Appendix D

Sobel and Goodman Tests of Perceived Flexibility for Female Caregivers²⁸ (N=129)

Mediation Test	Coefficient (SE)	z-score
Sobel	-.14 (.06)	-2.37*
Goodman-1	-.14 (.06)	-2.33*
Goodman-2	-.14 (.06)	-2.41*

*p<.05

Percentile and Bias-corrected bootstrap results for Sobel: 1000 replications

Indirect effect	Coefficient (SE)	Bias	<u>95% Bias-corrected confidence interval</u>	
			Lower CI	Upper CI
Perceived flexibility	-.22(.07)	.087	-.42	-.17

Note: Confidence intervals containing zero are interpreted as non-significant.

²⁸ These analyses were conducted with unweighted data, as STATA did not allow weights when using the Sobel or bootstrapping tests.

Appendix E

Unstandardized OLS coefficients with Fair/Poor Health as Reference Group

DV=Perceived Stress	Unstand. Coefficients (SE)
Perceived Flex	-.36(.15)*
Age	-.02(.01)**
Female	.25(.16)
Fair/poor health	.39(.20)
White	-.43(.21)*
Work-to-family conflict	.60(.14)***
Work-to-family conflict X Female	-.40(.17)*
Perceived Flex X Fair/Poor health	-.50(.23)*
Adjusted R2	.40

*p<.05; **p<.01; ***p<.001

Appendix F

Supplemental Mediation Analyses of Use of Flexibility and Stress using Sobel and Bootstrapping Tests²⁹*Sobel and Goodman Tests*

Mediation Test	Coefficient (SE)	z-score
Sobel	-.04 (.13)	-0.34
Goodman-1	-.04 (.13)	-0.34
Goodman-2	-.04 (.13)	-0.35

***p<.001

Percentile and Bias-corrected bootstrap results for Sobel: 1000 replications

Indirect effect	Coefficient (SE)	Bias	<u>95% Bias-corrected confidence interval</u>	
			Lower CI	Upper CI
Perceived flexibility	-.04(.14)	.0002	-.31	.20

Note: Confidence intervals containing zero are interpreted as non-significant.

²⁹ These analyses were conducted with unweighted data, as STATA did not allow weights when using the Sobel or bootstrapping tests

Appendix G

Unstandardized OLS Coefficients with Fair/Poor Health as Reference Group

DV=Perceived Stress	Unstand. Coefficients (SE)
Use of Flex	-1.00(.33)**
Age	-.02(.01)*
Female	.26(.16)
Fair/poor health	.41(.21)*
White	-.43(.22)*
Work-to-family conflict	.65(.12)***
Work-to-family conflict X Female	-.37(.17)*
Use of Flex X Fair/Poor health	1.70(.73)*
Adjusted R2	.40

*p<.05; **p<.01; ***p<.001

Chapter Four: The relationship between stress, depression, and work-family conflict: Does the type of caregiving matter?

Abstract

This exploratory study, guided by Pearlin's stress process model (1990), questions if there are differences in perceived stress, depression, work-to-family and family-to-work conflict among employees caring for an older adult, employees caring for children, and employees not currently involved in caregiving. The analyses are conducted using secondary data from the National Study of the Changing Workforce (2008), a nationally representative survey of people working for pay in the United States. Results indicate that caregivers of older adults report more work-family role conflict, higher stress, and a higher likelihood of experiencing depressive symptoms than employees not involved in caregiving. Employees with eldercare responsibilities were also more stressed and more likely to report depressive symptoms than those with only childcare responsibilities, though there are no significant differences in work-family role conflict between these two groups. These findings suggest that while work-family role conflict is a source of psychological distress among employees with caregiving responsibilities, additional factors need to be considered. Implications for employers, policymakers, and researchers are discussed.

Introduction

The aging of the population is accompanied by an increase in greater numbers of people needing help with Activities of Daily Living and Instrumental Activities of Daily Living (Centers for Disease Control and Prevention, 2009). Most older adults needing assistance (ranging from occasional to 24 hour support) are cared for—either in part or in total—by family members (National Alliance for Caregiving and Evercare, 2009). As the number of Americans age 65 and older nearly doubles over the next twenty years (Administration on Aging, 2010), a growing number of workers can expect to provide care to an elder relative at some point during their tenure in the workforce.

In a 2008 survey of the U.S. workforce, over 50 percent of workers anticipated that they will be providing care to a relative aged 65 or older within the next five years; 17 percent reported doing so currently (Aumann, Galinsky, Sakai, Brown, & Bond, 2010). Research has found that caregiving for an older adult is associated with decreased psychological and physical well-being (Marks, Lambert, & Choi, 2002; Montgomery, Rowe, & Kosloski, 2007; Pinquart & Sorensen, 2003; Schulz, Newsom, Mittelmark, Burton, Hirsch, & Jackson, 1997). These findings are applicable to caregivers who are working for pay in addition to providing care (Greenberg, Seltzer, & Brewer, 2006; Metlife Study of Working Caregivers and Employer Health Costs, 2010). Employed caregivers of older adults also report higher levels of work-family conflict than their workforce counterparts not engaged in eldercare (Marks, 1998), making it even more difficult for caregivers to fulfill work and caregiving responsibilities (Edwards, Zarit, Stephens, & Townsend, 2002).

Family caregivers provide more than 80 percent of the care older adults receive (National Alliance for Caregiving and Evercare, 2009). The cost value of the care they provide amounts to an estimated 375 billion dollars a year, nearly twice the amount spent on in-home care and long term care services (National Alliance for Caregiving and Evercare, 2009). It is vital that caregivers who are also working for pay are well enough and have the resources needed to fulfill both work and caregiving responsibilities.

The majority of caregivers are also employed (National Alliance of Caregiving & AARP, 2009), and many report difficulty in managing work and caregiving demands (Families and Work Institute, 2002). Unaddressed, the caregiving strains experienced by employees are associated with negative consequences for employers as well. In fact, the costs of caregiver strain are already evident at the workplace. By the most conservative estimates, businesses lose over seventeen billion dollars yearly due to costs associated with work accommodations and with the need to replace full-time employees who must leave the workforce because of elder care responsibilities (MetLife Mature Market Institute & National Alliance for Caregiving, 2006).

Ultimately, more research is needed to explore the relationships between caregiving, work-family balance, and employee well-being to ensure employees who are also caregivers can meet the demands of both roles. To date, little research has investigated how the work-family experiences of the caregivers of older adults compare to employees engaged in other caregiving roles, as well as those not currently providing care. Therefore, the purpose of this exploratory study is use a nationally representative sample to investigate if there are differences in perceived stress, depression, work-to-family and family-to-work conflict among employees caring for an older adult,

employees caring for children, employees caring for both a child and older adults, and employees not currently involved in caregiving.

Literature Review

Employees caring for an older adult are more stressed and are more likely to report depressive symptoms than employees not involved in elder care (Burton, Chen, Conti, Pransky, & Edington, 2004; Pinquart, Sorensen, 2003; Scott, Hwang, & Rogers, 2006). Caregivers also report higher levels of work-family role conflict³⁰ (Chapman, Ingersoll-Dayton, & Neal, 1994; Frye & Breagh, 2004, Marks, 1998). Research has also found that employees with child care responsibilities report greater stress and higher levels of work-family role conflict than employees without child care responsibilities (Boyar, Maertz, Mosley, & Carr, 2008; Buffardi, Smith, O'Brien, Erdwins, 1999; Scott, Hwang, & Rogers, 2006; Voydanoff, 2004). Interestingly, Marks (1998) found that the association between caregiving and psychological distress was mediated by work-family role conflict. This has led some to theorize that the negative effects experienced by employees with caregiving responsibilities can be explained by their increased levels of work-family conflict (Martire & Stephens, 2003).

However, according to the stress process model (Pearlin, Mullan, Semple, & Skaff, 1990), caregiver distress is a function of “a mix of circumstances, experiences, responses and resources” (Pearlin, Mullan, Semple, & Skaff, 1990, p. 591) rather than the result of a “unitary phenomenon” (p. 591). The stress process model (Figure 1) suggests that work-family conflict is one potential antecedent of stress among caregivers of older adults. Other factors to consider include the context of caregiving, primary stressors,

³⁰ Stress is a more global assessment of negative affect/physiological response and could have a number of different causes whereas work-family conflict refers to role conflicts.

individual responses to stress, and potential mediators of stress. The model was based on the experiences of those caring for an older adult experiencing significant cognitive decline and has also been applied to more general samples of caregivers of older adults. Yet, it may also serve as a useful framework for exploring how providing care to an older adult differs from providing care in other contexts (e.g. as a parent to a young child, or both eldercare and childcare) and why those providing one type of care may report more result in greater psychological distress than other types of caregiving.

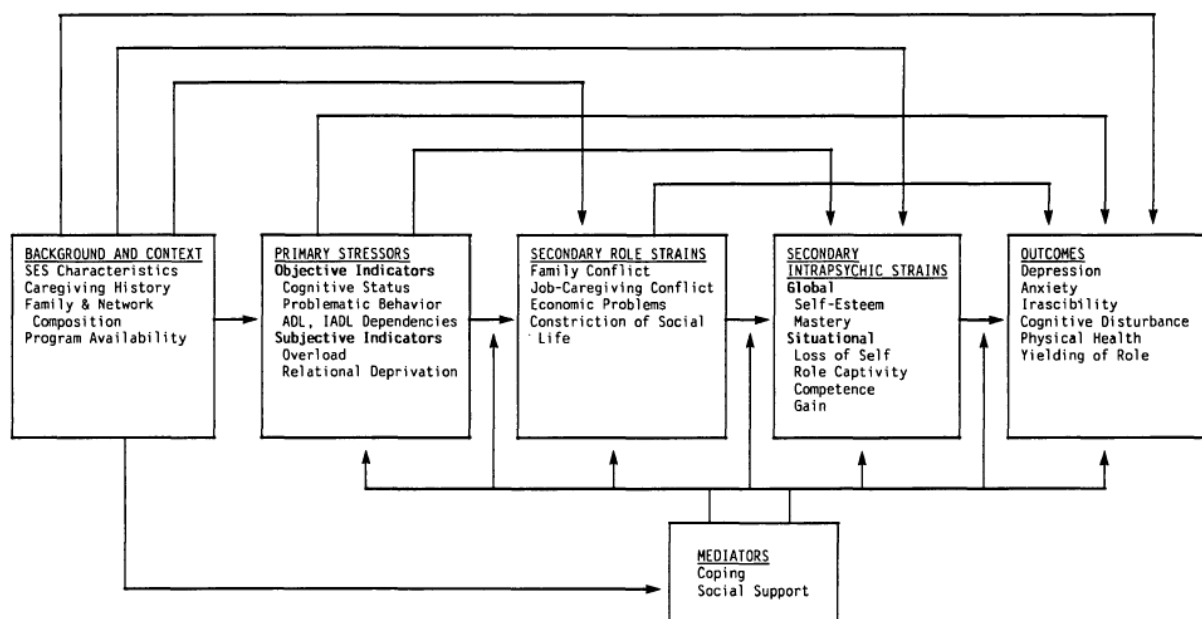


Figure 1. The Stress Process Model (Pearlin, Mullan, Semple, & Skaff, 1990, p. 586)

There are certainly differences in the context of caregiving between those caring for an older adult and those caring for a child. While many make a conscious choice to become a parent, caring for an older adult is not a role one actively pursues, as in many cases, eldercare represents the “involuntary transformation” of an important relationship

(Pearlin, 1990, p. 584). Additionally, 43 percent of caregivers of older adults report that they feel like they had no choice in taking on the caregiving role.

Program availability also varies greatly between children and older adults needing care. While communities have multiple institutions to serve children (daycare centers, schools, afterschool programs) far fewer programs are available to serve adults needing assistance (Brantman, 2003). For example, there are approximately 4,600 adult day centers in the U.S. (National Adult Day Services Association, 2010); conversely, there are nearly 120,000 child care centers (not including home-based child-care) in the U.S. (National Association of Child Care Resource and Referral Agencies, 2011). While caregivers of older adults may be hard-pressed to find a local care facility, parents are not likely to face the same difficulty. Notably, Gareis & Barnett (2008) found that parents of school age children who were satisfied with the available community programs reported higher perceptions of work-to-family enhancement.

Perhaps even more importantly, community programs “link the caregiver to the larger community (which serves to) reduce the isolation and alienation that many caregivers experience” (Pearlin, 1990, p. 586). If there are fewer resources available for older adults, there are also fewer opportunities for caregivers of older adults to connect with one another to create formal and informal support networks (a key mediator of caregiving distress).

While some of the primary stressors may be similar among those caring for children and those caring for older adults (IADL and ADL dependencies, problematic behavior, etc.) the meaning ascribed to them is not (Kossek, Colquitt, & Noe, 2001). For the most part, children become more and more independent as they age, transitioning

through each stage of child and adolescent development (with many celebrations along the way) as they become adults themselves. Conversely, elder care recipients become more dependent as they age and caregiving only fully concludes with their death, even if they are placed in a nursing home or similar facility.

Ultimately, caring for an older adult may exact a higher emotional toll on caregivers while providing fewer role rewards (Buffardi, Smith, O'Brien, & Erdwins, 1999). Therefore, it is plausible that employed caregivers of older adults would experience greater strain and higher rates of depression than those caring for children, even if levels of role conflict are similar between groups. Little research has explored the relationship between type of dependent care responsibility and employee outcomes such as work-family role conflict and employee well-being.

To date, three studies have shown no significant differences in work-family role conflict between employees caring for older adults and those caring for children (Chapman, Ingersoll-Dayton, & Neal, 1994, Kossek, Colquitt, & Noe, 2001, & Lee, Foos, & Clow, 2010). Additional research utilizing nationally representative samples of employees is merited as all three studies relied on convenience sampling and two of the studies were limited to university employees. Interestingly, Kossek et al. (2001) did find that workplace climate (e.g. being able to freely discuss family issues) moderated the relationship between type of dependent care responsibilities and family-to-work climate such that working in an unsupportive environment was more detrimental to caregivers of older adults.

It remains unclear if employees caring for an older adult report greater stress than employees caring for a child. In a study limited to hospital nurses, Scott, Hwang, and

Rogers (2006) found no differences in perceived stress among those caring for a child or older adult, though those caring for an older adult at home reported greater fatigue. To date, no study has explored if there are differences in the likelihood of reporting depressive symptoms between those caring for an older adult and those caring for children.

Finally, a growing body of research has investigated the experiences of the 10 percent of employees who are caring for both a child and older adult (Levin-Epstein, 2006; Neal & Hammer, 2007). The effect of ‘sandwich’ caregiving is unclear. Some studies indicate that an additional caregiving role results in greater role conflict and stress, while other research has not found this to be the case. Chapman, Ingersoll-Dayton, and Neal (1994) found that employees caring for both a child and an older adult reported greater work-family role conflict than those only caring for either a child or an older adult. Fredriksen and Scharlach (1999) report that sandwiched caregivers report greater emotional strain than those caring only for an older adult. However, Scott, Hwang, and Rogers, (2006) report no differences in perceived stress among nurses caring for an older adult, a child, or both. Finally, Christensen, Stephens, and Townsend (1998) found that feelings of mastery in caring for a parent and for a child were both significantly associated with life satisfaction among female employees. This finding raises the possibility that occupying these two disparate caregiving roles may be beneficial for the caregiver (Stephens, Franks, & Townsend, 1994; Stephens & Townsend, 1997).

This investigation seeks to address these gaps in the literature. This study will expand previous research by using a randomized, nationally representative sample of the U.S. workforce. Additionally, this study will compare caregivers of older adults to those

without caregiving responsibilities, as well as to those caring for children. Finally, this exploration will serve as an important update and expansion to Marks (1998), who found that caregivers of older adults working for pay had greater distress than employees not caring for older adults. Unlike Marks (1998), this study will also compare caregivers of older adults to those not providing care as well as to those caring for children.

Hypotheses (H) and Research Questions (RQ)

H1: Employees providing care to an older adult will report higher levels of stress than employees caring for one or more children

H2: Caring for an older adult will increase the likelihood that an employee will report experiencing depressive symptoms, as compared to employees caring for one or more children.

H3: There will be no differences in work-to-family conflict between employees providing care to an older adult and those caring for one or more children.

H4: There will be no differences in family-to-work conflict between employees providing care to an older adult and those caring for one or more children.

RQ: Are there differences in perceived depression, likelihood of experiencing depression, and work-to-family and family-to-work conflict between employees caring *only* for an older adult and employees caring for both an older adult *and* one or more children?

Methodology

Sample

This project utilizes cross-sectional data from the 2008 National Study of the Changing Workforce (NSCW), a repeated cross-sectional design national survey of the United States labor force that has been collected every five years since 1992. For the 2008 wave, Harris Interactive conducted 3,502 interviews between November 2007 and April 2008 using computer-assisted telephone interviewing. Interviews lasted approximately 50 minutes. The un-clustered random probability sample (stratified by region) was generated by random-digit-dial methods and limited to non-institutionalized adults (18+) working a paid job or operating an income producing business (in the

civilian labor force) and living within the 48 contiguous states.³¹ In households with more than one eligible person, one was selected randomly to be interviewed. The response rate was 54.6 percent. Interviewers initially offered a cash honorarium of \$25 as incentives and if refused, a higher amount (\$50) was offered. Of the 3,502 participants, there are 2,769 wage and salaried workers who work for someone else.³² The analyses were conducted using these 2,769 wage and salaried workers.

Measures

Caregiving status. Caregiving status was operationalized as whether or not respondents indicated that they had caregiving responsibilities. Initially, this variable was coded using four groups: eldercare (respondents who indicated that they currently provided special care or assistance to a relative age 65 years or older), childcare (respondents who indicated that they were the parent or guardian of a child who lived with them at least half of the year), sandwich care (respondents who indicated providing care to both an older adult and a child) and no caregiving (respondents who indicated that they were not currently caring for either a child or older adult). However, post-hoc power analyses (Soper, 2011) indicated a lack of power to detect significant effects among sandwich caregivers (.54), and somewhat limited power to detect significant effects for elder caregivers (.84) for three of the analyses (Depression, Work-to-Family

³¹ The sample was weighted by sex, race, age, and educational status to the March 2007 Current Population Survey to adjust for any sampling bias that might have occurred.

³² Excluding independent contractors and business owners.

Conflict, and Family-to-Work Conflict).³³ Therefore, a decision was made to code caregiving status as follows: elder care, only child care, no caregiving.

Perceived stress. Caregiver stress was operationalized using the Four Item Perceived Stress Scale³⁴ (Cohen, Kamarck, & Mermelstein, 1983). For the Perceived Stress Scale, respondents were asked the frequency (1 'Never' to 5 'Very Often') in which they felt stressed and overwhelmed in their personal lives. A low Cronbach's alpha (.62) for this scale led to the decision to modify it. First, the reverse coded, "How often have you felt confident about your ability to handle your personal problems" was removed from the scale, and in its place, an item from the 10-item³⁵ Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983). The reverse coded "How often have you felt that things were going your way" was also removed from the scale to improve the Cronbach's alpha to .72 with its removal. The mean of these three items was used to create the scale (for twelve cases with one missing item, the mean of two items was used). As this variable was positively skewed, the square root transformation was used to improve normality. The final three items that comprised this scale are found in Appendix A.

Depressive symptoms. Depressive symptoms was measured using the 2 item CES-D scale, which has been shown to work well as an initial screening instrument for depression (Whooley, Avins, Miranda, & Browner, 1997). Participants were asked whether or not they had been bothered by feeling depressed or hopeless in the last month

³³ The results of the analyses using four groups are included in Appendix B.

³⁴ See Appendix A for items included in this scale.

³⁵ The survey included the four questions from the four-item Perceived Stress Scale as well as this one additional item from the 10-item Perceived Stress Scale.

and whether or not they had little interest or pleasure in doing things in the past month. Respondents who agreed with one or both statements were coded as 1 and respondents who responded negatively to both statements were coded as 0.

Work-to-family conflict. Work-to-family conflict was operationalized using a scale comprised of five items asking about the frequency (1 ‘Never’ to 5 ‘Very Often’) in which participants experienced time-based and strain-based work-to-family conflict in the past 3 months. Sample items³⁶ include: “How often have you NOT had enough time for your family or other important people in your life because of your job?” and “How often has work kept you from doing as good a job at home as you could?” To create a scale, items were first reverse coded so that a higher score was indicative of greater spillover between domains. The mean of the five items was used to form the scale and in the case of 18 participants with data missing for one item, the mean of four items was used. The Cronbach’s alpha for the analytic sample was .86. As this variable was positively skewed, the square root transformation was used to improve normality. All items used to create the scale are listed in Appendix A.

Family-to-work conflict. Family-to-work spillover was operationalized using a scale comprised of five items asking about the frequency (1 ‘Never’ to ‘Very Often’) in which participants experienced time-based and strain-based family-to-work conflict. Sample items³⁷ include: “How often have you NOT had enough time for your family or other important people in your life because of your job?” and “In the past three months, how often has your family or personal life drained you of the energy you needed to do

³⁶ See Appendix A for all items that comprised the scale.

³⁷ See Appendix A for all items that comprised the scale.

your job?” This measure was normally distributed. To compute the scale, the mean of each of the five items was taken, and in the case of twelve participants with data missing for one item, the mean of four items was used. The Cronbach’s alpha for the analytic sample is .82. As this variable was positively skewed, the square root transformation was used to improve normality. All items used to create the scale can be found in Appendix A.

Sex. Respondents indicated their gender as either male or female. To create a dichotomous variable, females were coded as 1 and males were coded as 0.

Age. Respondents indicated their age in years. Respondent ages ranged from 18 to 91 years.

Marital status. Respondents indicated their marital status. Those who indicated that they were married or living with a partner were coded as 1 and all other responses were coded as 0.

Health status. Respondents were asked to rate their overall health as either ‘Excellent,’ ‘Good,’ ‘Fair,’ or ‘Poor.’ Due to the small number of respondents (7) reporting poor health, respondents reporting excellent or good health were coded as 1 and respondents reporting fair or poor health were coded as 0. This coding strategy is well established in research on health and well-being (Chen, Martin, & Matthews, 2006).

Race. Respondents were asked to identify their race as White; Black or African American; Asian, Pacific Islander, or Indian; or Other, including mixed. Respondents who identified themselves as White were coded as 1 and respondents who identified as another race were coded as 0.

Analytic Strategy

Data was managed and analyzed using STATA 11.0 IC. To explore the effect of caregiving status (any eldercare, childcare only, and no caregiving) on perceived stress, work-to-family conflict, and family-to-work conflict, OLS regression models were run, including the following control variables: gender, race, age, health status, and marital status. To explore the effect of caregiving status on depression, a logistic regression was run, including the same control variables as above.

Missing Data

From the full sample of 2,769 cases, 77 cases were removed because of missing data, yielding a sample of 2,692 valid cases. The variable with the most number of missing cases was respondent age, with 39 cases missing. Overall, this represents a total of less than 3 percent of cases lost due to listwise deletion.

Results

The means, standard deviations, and correlations of study variables are found in Table 1.

Table 1

Mean, standard deviations, and correlations of variables (N=2692)

Variable	M(SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Perceived Stress	2.47 (.96)													
2. Depression	32.21 (.47)	.51***												
3. Work-to-family conflict	2.54 (.87)	.45***	.28***											
4. Family-to-work conflict	2.10 (.68)	.43***	.29***	.52***										
5. Female	.55 (.50)	.12***	.03	.00	.05									
6. Age	45.95 (12.28)	-.15***	-.07***	-.13***	-.11***	.07								
7. White	.84 (.37)	-.06**	-.07***	.01	.01	-.05**	.15***							
8. Married	.66 (.47)	-.13***	-.15***	.00	-.03	-.14***	.03	.11***						
9. Excellent/good health	.80 (.40)	-.25***	-.20***	-.16***	-.13***	-.03	.02	.09***	.06***					
10. Elder care only	.12 (.32)	.05*	-.04***	.04	.04	.03	.14***	.02	-.06**	-.01				
11. Child care only	.34 (.47)	.04*	-.01	.11***	.13***	-.02	-.33***	-.06***	.21***	.01	-.26***			
12. Sandwich care	.07 (.25)	.07***	.04*	.05*	.05**	.01	-.05**	.00	.06**	.01	-.10***	-.19***		
13. No caregiving	.47 (.50)	-.11***	-.04	-.15***	-.17***	-.01	.25***	.04*	-.19***	-.01	-.35***	-.68***	-.25***	
14. Elder care (any)	.19 (.39)	.09***	.06**	.06**	.06**	.03	.08***	.02	-.01	.00	.77***	-.34***	.56***	-.45***

*p<.05; **p<.01; ***p<.001

Twelve percent of respondents reported providing care to an older adult, 34 percent reported providing care to one or more children, 7 percent reported providing care to both an older adult and a child, and 47 percent reported no current caregiving responsibilities. In total, 19 percent of the sample reported that they are currently providing care to an older adult. The majority of the sample are White (84%), married (66%), and in good or excellent health (80%). The average age of those caring only for children was 40.3 years of age while those caring only for an older adult were 47.9 years of age, on average. Those caring for both a child and older adult were 43.7 years of age, while those without any current caregiving responsibilities were 49.1 years of age.

The results of the regression analyses are found in Table 2.

Table 2

Fully Standardized OLS Coefficients and Standardized Odds Ratios for Dependent Variables for

Three Caregiving Groups (N=2692)

	Perceived stress ¹	Depression	Work-to-family conflict ¹	Family-to-work conflict ¹
	Standardized Coefficients	Standardized Odds Ratios	Standardized Coefficients	Standardized Coefficients
Female	.11***	1.03	-.01	.02
Age	-.13***	.99	-.07**	-.07*
White	.00	.93	.06*	.04
Married/cohabiting	-.08**	.79***	.02	-.04
Excellent/good health	-.22***	.70***	-.16***	-.14***
Caregiving status				
(reference: any elder care)				
Child care only	-.12***	.86*	.02	.02
No caregiving	-.20***	.76***	-.12***	-.14***
R ²	.11	.05	.05	.05

*p<.05; **p<.01; ***p<.001

¹ Square root transformation

Consistent with previous research, having eldercare responsibilities (as compared to no caregiving responsibilities) was associated with increased stress, a higher likelihood of reporting depressive symptoms, and higher levels of work-to-family role conflict and family-to-work role conflict. Hypothesis 1 was supported: employees caring only for children ($\beta = -0.12$; $p < .001$) reported significantly less stress than those employees with any eldercare responsibilities. Hypothesis 2 was also supported, as employees caring for children were also less likely to report depressive symptoms than those caring for an older adult. Caring for a child (compared to caring for an older adult) decreased the odds

of reporting depressive symptoms by 14 percent. Finally, in support of hypotheses three and four, there were no differences in work-to-family conflict or family-to-work conflict between employees caring for children and employees caring for an older adult. Given the statistical limitations mentioned previously, the research question proposed remained unexplored.

Discussion

Consistent with previous research, this study found that caregivers of older adults experience more work-family role conflict than employees not involved in caregiving. They also reported higher stress and more depressive symptoms than their peers not providing care. It is concerning that this investigation also found that employees with eldercare responsibilities were more stressed and more likely to report depressive symptoms than those with only childcare responsibilities, despite no significant differences in work-family role conflict. It would appear that while work-family role conflict is a source of stress among employees with caregiving responsibilities, additional factors need to be considered to ascertain levels of psychological distress among caregivers. Pearlin's stress process model may offer some insights into what these other factors may be.

The context of caregiving is markedly different between parents and those caring for an older adult. The meaning ascribed to caring for a child is vastly different:

In caring for children, there is a lot of positive reinforcement and reward along with the worries that burdensome task brings, and those positive aspects are rather public. Elder care is done, for the most part, off to the side and in the shadows. There is no pervasive rhetoric, in American

society, of the value of time spent with the elderly...The difficulties of raising children are balanced by the joys and the knowledge that they will grow up and move out and go on to lives of their own, and you get to watch all of that. But the difficulties of elder care come with the grim knowledge that they will eventually end when death takes the beloved elder from you (Franks, 2009).

In today's society, parenting a child also offers far more role rewards than does caring for an older adult.

Secondly, a key mediator of stress—social support—may be greater for employees caring for children, as compared to employees caring for an older adult. The relationship between social support networks and physical and psychological health among older adults is well documented (Lubben & Gironda, 2004; Rubinstein, Lubben, & Mintzer, 1994). More recent research has explored the relationship between social networks and caregiver well-being. Evidence shows that caregivers with more social connections, as indicated by higher scores on the Lubben Social Network Scale (Lubben, 1988) reported better physical and psychological health (Chen, Wong, Mok, Ungvari, & Tang, 2010; Tang, Lau, Mok, Ungvari, & Wong, 2011). If employed caregivers of older adults do in fact have fewer opportunities to develop strong social networks within their communities (as compared to parents), having access to social support from other arenas (e.g. the workplace) would be particularly critical to their well-being. Therefore, it is not surprising that not being able to freely discuss family issues at work is more detrimental to caregivers of older adults (Kossek, Noe, & Colquitt, 2001).

This study raises a number of critical issues for researchers, policymakers, and employers to consider. Caring for an older adult can be an enriching, rewarding, and positive experience (Bainbridge, Cregan, & Kulik, 2006; Marks, 1998). Yet, for many employees, caring for an older adult has a deleterious impact on their well-being. Therefore, it is imperative that researchers discern what resources employed caregivers need, and for policymakers and employers to implement them whenever feasible.

Limitations

This study has a number of serious limitations. Due to limited sample sizes of employees caring for older adults and employees caring for both an older adult and one or more children, there was limited power to detect significant effects when four categories of caregiver status were used. It is possible that larger sample sizes would reveal significant differences in depression, work-to-family conflict, and family-to-work conflict among caregivers of older adults (compared to those caring for children and to ‘sandwiched caregivers’). To address this limitation, caregiving status was operationalized using three categories (any elder care, only child care, no caregiving). This analytic strategy however, is also problematic, as it combines employees caring only for an older adult with employees caring for an older adult and one or more children. There are likely important differences between these two groups of caregivers.

This investigation would also have been improved by controlling for the primary caregiving stressors (e.g. problematic behaviors, role overload) identified by Pearlin (1990). Additionally, including measures inquiring about programs available at work and within the community would have also strengthened this investigation. Finally, as this

investigation utilized cross-sectional data, causal relationships between variables cannot be established.

Implications

Unless serious action is taken, the U.S. will face an elder care crisis, wherein there will be a major shortage of family and professional caregivers to meet the needs of older adults who require assistance (Kornblum, 2005). Ensuring the well-being of family caregivers is critical to avoiding this crisis, as family caregivers provide more than 80 percent of the care older adults receive (National Alliance for Caregiving and Evercare, 2009). The job performance of employees caring for an older adult will also suffer if they are distressed from trying to manage both work and caregiving responsibilities. Yet, less than a quarter of companies with 100-plus employees have instituted formal programs to assist employees caring for an older adult.

Along with offering basic services, such as resource and referral programs, leave for elder care, and flexible work options (Chung, 2007) employers should ensure that the workplace is supportive of all employees with caregiving responsibilities, particularly those employees caring for older adults. Larger employers may consider offering a support group designed specifically for employees caring for an older adult. This setting would provide an opportunity for caregivers to access social support and to learn about additional resources and services that might benefit themselves or their loved one. Additional programs that employers may want to offer include long-term care insurance, educational seminars, and health assessments of both the caregiver and care recipient, among others (Chung, 2007).

Policymakers should consider ways that they can help alleviate the stress and strain experienced by many employed caregivers of older adults. For example, policymakers should consider changing the regulations on the Dependent Care Flexible Spending Account (FSA) in order to allow more caregivers to participate. Under current regulations, you must co-reside with the older adult to be eligible for the Dependent Care FSA and the Dependent Care FSA can only be used for certain elder-care expenses. Furthermore, if the employee is married, the spouse must also work, be looking for work, or be enrolled as a full-time student. More caregivers could benefit from the Dependent Care FSA if co-residency requirements were removed and other elder care expenses (such as respite services and long term care) were covered. Additionally, married employees should be eligible, regardless of the work status of their spouse. A spouse who is caring for an older adult may require regular weekly respite from daily caregiving, or may be caring for children ('sandwich' caregivers), and thus unable to provide daily care and assistance to an older adult as well.

Future research

This study utilized a nationally representative sample of U.S. employees; future research should do the same while ensuring an adequate number of employees caring for older adults and employees caring for both older adults and one or more children. This research should control for the other components outlined in Pearlin's stress process model as well, including program availability at work and within the caregiver's community. There is also a great need for research exploring the lived experience of being a caregiver in order to capture some of the role rewards of caring for an older adult.

This research would be particularly helpful in and thus informing efforts to change societal perceptions about the experience of caring for older adults.

Conclusion

Caring for an older adult can be an engaging, meaningful, and positive experience (Marks, 1998; Bainbridge, Cregan, & Kulik, 2006). More caregivers will perceive their experience as positive when they are provided with the resources and social support needed to manage caregiving and work, and when society perceives their work as a caregiver to an older adult as important and valuable.

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Appendix A

Perceived Stress Scale

In the last month...?

1. Never
 2. Almost never
 3. Sometimes
 4. Fairly Often
 5. Very Often
1. How often have you felt nervous and stressed?
 2. How often have you felt that you were unable to control the important things in your life?
 3. How often have you felt that difficulties were piling up so high that you could not overcome them?

Work-to-family Conflict

Over the past 3 months...?

1. Very Often
 2. Often
 3. Sometimes
 4. Rarely
 5. Never
1. How often have you NOT had enough time for your family or other important people in your life because of your job?
 2. How often have you NOT had the energy to do things with your family or other important people in your life because of your job?
 3. How often has work kept you from doing as good a job at home as you could?
 4. How often have you NOT been in as good a mood as you would like to be at home because of your job?
 5. How often has your job kept you from concentrating on important things in your family or personal life?

Family-to-work Conflict

Over the past 3 months...?

1. Very Often
 2. Often
 3. Sometimes
 4. Rarely
 5. Never
-
1. How often have you NOT been in as good a mood as you would like to be at work because of your personal or family life?
 2. How often has your family or personal life kept you from doing as good a job at work as you could?
 3. In the past three months, how often has your family or personal life drained you of the energy you needed to do your job?
 4. How often has your family or personal life kept you from concentrating on your job?
 5. How often have you not had enough time for your job because of your family or personal life?

Appendix B

Fully Standardized OLS Coefficients and Standardized Odds Ratios for Dependent Variables for Four Caregiving Groups (N=2692)

	Perceived stress ¹	Depression	Work-to-family conflict ¹	Family-to-work conflict ¹
	Standardized Coefficients	Standardized Odds Ratios	Standardized Coefficients	Standardized Coefficients
Female	.11***	1.03	-.01	.02
Age	-.12***	.91	-.07**	-.07*
White	.00	.93	.06*	.04
Married/cohabiting	-.09**	.78***	.01	-.04
Excellent/good health	-.22***	.70***	-.16***	-.14***
Caregiving status				
(reference: only elder care)				
Child care only	-.07 [#]	.91	.03	.03
Sandwich care	.06 [#]	1.07	.01	.02
No caregiving	-.16***	.81**	-.11**	-.13**
R ²	.11	.05	.05	.05

[#] p<.10; *p<.05; **p<.01; ***p<.001

¹ Square root transformation

Conclusion

“There are only four kinds of people in the world—those who have been caregivers, those who are currently caregivers, those who will be caregivers and those who will need caregivers.”

—Rosalyn

Carter

Over the next twenty years, millions of people in the U.S. will find themselves needing care and millions more will become caregivers. In 2030, there will be 72.1 million adults age 65 and older living in the U.S., more than double the number in 2000. In 2030, older adults will comprise nearly one fifth of the total U.S. population (Administration on Aging, 2011). Family caregivers, the majority of them also active in the workforce, will be critical to meeting these unprecedented caregiving demands.

Much action is needed by employers, communities, and policymakers to ensure that family caregivers who are also working for pay can effectively perform the responsibilities associated with both caregiving and work roles. As work-family role conflict is a precursor to poorer physical and psychological health, as well as decreased role performance (Edwards, Zarit, Stephens, & Townsend, 2002; Marks, 1998), programs and policies targeted at caregivers of older adults should consider ways to alleviate work-family role conflict. This dissertation has highlighted that the programs and policies at the workplace matter greatly to the work-family role conflict of caregivers of older adults.

The findings of this dissertation reinforce that workplace policies and programs offered by employers need to be fully embraced at every level of the organization to have a meaningful impact (Mennino, Rubin, & Brayfield, 2005). More specifically, caregivers

do best when they are not overloaded with work. Caregivers also need supervisors that recognize and respect that they have caregiving responsibilities. The level of work-family role conflict they experience is also tied to the workplace environment—whether it is conducive to managing both roles—or whether caregivers feel they must choose between advancing in their jobs or caregiving responsibilities. Many employers will find that designing a workplace that supports the needs of caregivers of older adults is a necessity; estimates indicate that in 2020, over a third of employees will be caring for an older adult.

The opportunity to work flexibly is an important resource for caregivers. Prior research failing to find a clear benefit to workplace flexibility among caregivers of older adults should not be interpreted as evidence that this resource is essentially useless. Rather, different types of flexible work options may yield different outcomes than the one being measured. For example, Pavalko and Henderson (2006) found no relationship between access to flexible work hours and psychological distress; however, having access to flexible work options significantly increased the odds of remaining employed. Similarly, this dissertation found that while one measure of workplace flexibility was associated with work-family conflict, a second measure of workplace flexibility was not. More research is needed to discern what types of flexible work options can be expected to have an effect on outcome measures of interest (e.g. stress, job satisfaction, intent to quit, etc.).

A number of studies have astutely noted that measuring *access to flexible work options* is not analogous to measuring actual *use of flexible work options*. In fact, measuring access rather than use is frequently cited as a limitation of a study. Certainly this is the case when employees have access to flexible work options ‘on paper,’ but

cannot utilize them without professional repercussions. Yet, I do not believe measuring access to flexible work options (rather than use) is a limitation (again, provided employees are able to use the flexible work options provided to them). Rather, access to flexible work options and use of flexible work options may affect different outcomes for different caregivers. For example, caregivers providing care very intermittently may not regularly use flexible work options but may plan to do so if caregiving responsibilities increase. Access to flexible work options could effectively yield a reduction in future caregiving concerns, as well as higher rates of employee retention, while use of flexible work might impact current level of caregiving strain. Ideally, a study would measure both access and use of flexible work options to help discern the relationships between access, use, and the outcomes of interest.

This dissertation also has significant implications for social work practice. Social work practitioners can play a critical role in helping employers respond to the needs of employees who are also caregivers, and should position themselves as uniquely trained to do so. Indeed, mid-sized and larger employers should consider hiring a social worker, either as consultant, or on staff, to coordinate support services for employees caring for older adults. Social workers could conduct individual assessments and connect employees with services offered in their communities. They could also lead information sharing/support groups with employees caring for older adults during work hours. Social workers could also invite a guest speaker once a month to talk about issues of concern, such as estate planning or issues related to obtaining a health care proxy. These groups would offer a significant source of social support for caregivers. Social workers in this role could also communicate the importance of providing resources to employees with

caregiving responsibilities to managers and company executives. This would help ensure that the workplace environment is truly supportive of employees caring for older adults.

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