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Balancing Caregiving and Work: Role Conflict and Role Strain Dynamics

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Abstract

Positing role conflict as a bidirectional construct in which work interferes with caregiving (WIC) and caregiving interferes with work (CIW), this study investigated its antecedents (demands and support of caregiving and work) and consequences (role strain). A national sample of 583 women between the ages of 50 and 64 years identified using random-digit-dial procedures completed a telephone survey. Structural equation modeling revealed that caregiving demands were positively associated with CIW and caregiving burden; instrumental caregiving support reduced CIW and caregiving burden. Work demands were positively associated with WIC, CIW, caregiving burden, and work burden. Emotional workplace support reduced WIC, CIW, and work burden. CIW and WIC were positively associated with caregiving burden; only WIC was positively associated with work burden. Findings suggest that demands and supports related to the caregiving role do not influence work-related role strain; work demands and supports influence role strain experienced from both caregiving and work domains.

Keywords

older workers; elder caregiving; work–family conflict; caregiving burden; work burden

Middle-aged and older women provide the bulk of care to aging family members in the United States, a trend projected to grow from its current 20 to 22 million women to 37 to 40 million by 2050 (U.S. Department of Human and Health Services/U.S. Department of Labor, 2003). In tandem with this development, older women now participate in the labor force at a rate higher than ever before, with forecasts indicating that by 2016, 63.5% of women aged 55 years and older will be actively engaged in the labor force (Toosi, 2007). These two demographic trends portend an increase in the number of women who will have

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significant caregiving responsibilities for older relatives at a time in their lives when they will also be actively engaged in the labor force.

Although employed women are likely to continue working even when they become caregivers (Moen, Robison, & Fields, 1994), there is good evidence that caregiving affects a woman's work life (Lilly, Laporte, & Coyte, 2007). Caregivers arrive late to work, leave early, miss work, and experience frequent interruptions at work because of their caregiving responsibilities (Barling, MacEwen, Kelloway, & Higginbottom, 1994; Barnett, 2005; Wakabayashi & Donato, 2005). More than 30 years of research has documented that caregiving responsibilities take a toll on both the psychological (Schulz, O'Brien, Bookwala, & Fleissner, 1995; Schulz, Visintainer, & Williamson, 1990) and physical (Ferraro, Farmer, & Wybraniec, 1997; Schulz et al., 1995) well-being of caregivers. Employers also bear significant costs directly attributable to the caregiving responsibilities of their employees, estimated at \$1,142.50 per year per caregiving employee, for a total annual cost of \$29 billion (U.S. Department of Health and Human Services/U.S. Department of Labor, 2003).

As the number of older women who simultaneously embrace the roles of caregiver and employee continues to grow, so do questions about how women manage these dual roles and the effects that doing so have on their well-being. Although extensive research has been conducted about the interaction between work and family responsibilities experienced by women caring for young children, a recent report from the Sloan Center on Aging and Work (Pitt-Catsoupes, Matz-Costa, & Besen, 2009) indicated that the experiences of women with elder care responsibilities differed significantly from those with other dependent care responsibilities. For example, women who provided care to an older person reported having less access to flexible work options, receiving less support from their supervisors, and having less job security than did those who provided child care or other dependent care.

Research has tended to examine the caregiver role in isolation from other roles (Stephens & Franks, 1999). Yet the reality is that women's lives are complex, as many women balance the caregiving role and the role of employee. The growing number of employed women who provide care to an older person, their role in the labor market, and their critical role in the lives of elder dependents makes it essential to understand the extent to which the demands of work and caregiving contribute to role conflict and role strain. The analyses that follow test a series of hypotheses about work and caregiving demands, instrumental and emotional support, role conflict, and role strain to increase understanding of how best to improve the lives of women who are both in the labor force and unpaid family caregivers.

Conceptual Model and Hypotheses

The conceptual model depicted in Figure 1 focuses on the direct relationships of demands (i.e., caregiving and work demands) and social support (i.e., instrumental caregiving and emotional workplace support) on role conflict and role strain. We posited that role conflict mediated the relationships between demands, support, and role strain.

Drawing on the broader work–family literature, we conceptualized role conflict as bidirectional (Carlson & Frone, 2003; Frone, Yardley, & Markel, 1997), that is, work

interferes with caregiving (WIC) and caregiving interferes with work (CIW). Consistent with the broader work–family literature, these dual constructs were viewed as distinct, with unique antecedents (Frone, Russell, & Cooper, 1992) and consequences (Allen, Eby, Poteet, Lima, & Lentz, 2004; Byron, 2005; Frone, 2000; Frone et al., 1997; Grzywacz & Marks, 2000; Kossek & Ozeki, 1998). Our analyses add new information to the work–family literature, as existing research has not examined the antecedents and consequences of bidirectional work–family conflict in the specific context of elder care.

A review of the literature suggested that the nature of demands and supports in the work and caregiving domains differs. Caregiving demands are driven by the needs of the care recipient. Older persons who need more care put significant demands on their caregivers, in terms of the amount of care required and the time needed to provide this care. Work demands, on the other hand, are inherent to the employment position a person holds and include work conditions, work load, and exposure to risks (Cooper, Dewe, & O'Driscoll, 2001; Schaufeli & Bakker, 2004).

Research has suggested that informal support in organizations is more important than formal support in explaining employee outcomes such as job satisfaction, turnover intent, absenteeism, work–family conflict, and stress (Behson, 2005). Other research has confirmed the impact of informal support on outcomes such as job satisfaction, family satisfaction, organizational commitment, turnover intentions, and work–family conflict (Allen, 2001; Behson, 2002; Carlson & Perrewé, 1999; Thompson, Beauvais, & Lyness, 1999). In addition, there is evidence that informal support reduces the negative consequences of caregiving stress (Miller et al., 2001). Primary forms of informal support are instrumental, such as people other than the caregiver provide assistance to the care recipient, and emotional, such as the caregiver has people to whom she can talk about a difficult situation (House, Umberson, & Landis, 1988; Sarason, Pierce, & Sarason, 1990; Thoits, 1995).

The coping literature suggests the value of focusing on emotional support in the work domain and instrumental support in the caregiving domain. Cognitive–transactional theory suggests that the impact of coping is contextual (Parker & Endler, 1996). Instrumental support, which exemplifies problem-focused or active coping, creates a better outcome if the stressor is controllable; palliative coping strategies, by means such as emotional support, work better for uncontrollable stressors (Cunningham & De La Rosa, 2008; Forsythe & Compas, 1987). Researchers have contended that the work sphere is less controllable than the family domain because of the dynamic and rapidly changing internal and external environments experienced in the workplace (Cartwright & Cooper, 1996). Hence, instrumental support would be a better fit in the controllable elder caregiving domain, and emotional support would align better with the uncontrollable work domain. Therefore, in this study we explored whether instrumental support from the caregiving domain and emotional support from the work domain reduced role conflict and role strain. We use the job demands–resources model, cognitive–transactional coping theory, and the scarcity model of role theory to help develop our research model and hypotheses.

Demands and Outcomes

Hypotheses related to caregiving and workplace demands were based on the job demands–resources model (Bakker, Demerouti, & Verbeke, 2004; Demerouti, Nachreiner, Baker, & Schaufeli, 2001; Schaufeli & Bakker, 2004). Demands of the job “have to be done,” and they include physical, psychological, social, or organizational aspects of a job that require sustained physical and psychological effort (Schaufeli & Bakker, 2004). Efforts to juggle multiple demands may result in high physiological or psychological costs, including depression, anxiety, or burnout. With regard to demands, both the job demands–resources model (Bakker & Demerouti, 2007) and the demand–control model (Karasek, 1979) indicate that job demands are related to strain. This relationship results from a disruption in the equilibrium of the demands employees experience in their work and the resources they have available (Bakker & Demerouti, 2007). Job demands may exhaust employees’ mental and physical resources, resulting in a reduction in personal energy and eventual health problems. Excessive demands in the workplace create a resource drain that has negative consequences, such as role conflict and strain (Grandey & Cropanzano, 1999; Hobfoll, 1989, 2002), conceptualized in this study as WIC and work burden, respectively. We applied a similar logic to the caregiving domain. Caregiving demands may exhaust employees’ mental and physical resources, again resulting in role conflict and strain or, as conceptualized in this study, CIW and caregiving burden. As such, the following hypotheses are posited:

Hypothesis 1a: Caregiving demands will be positively associated with CIW.

Hypothesis 1b: Caregiving demands will be positively associated with caregiving burden.

Hypothesis 2a: Work demands will be positively associated with WIC.

Hypothesis 2b: Work demands will be positively associated with work burden.

Supports and Outcomes

The cognitive–transactional model of coping explains how social support can be associated with the outcomes of CIW and caregiving burden. Social resources help individuals cope by providing emotional support and informational guidance (Holahan, Moos, & Schaefer, 1996; Thoits, 1986). Social support from a variety of sources can reduce stressors and has been shown to have consequences for individual health and well-being (Holahan et al., 1996). Neal and Hammer (2009) suggested that coping strategies that increase the emotional resources of women may be negatively associated with depression and result in more positive spillover from work to family, and vice versa; cognitive (prioritizing) strategies may be positively associated with work–family balance. As noted earlier, problem-focused coping works best in controllable situations, and palliative coping has the greatest impact in uncontrollable situations (Cunningham & De La Rosa, 2008; Forsythe & Compas, 1987). Hence, unpaid instrumental support by friends and family and emotional support in the workplace should reduce role conflict and strain, leading to hypotheses that associate support with work–elder caregiving conflict and work and caregiving burden (see Hypotheses 3a, 3b, 4a, and 4b below).

Employees who have supportive supervisors or managers are less likely to experience work–family conflict (Allen, 2001; Anderson, Coffey, & Byerly, 2002; Beauregard, 2006; Fu & Schaffer, 2001; Thomas & Ganster, 1995; Thompson & Prottas, 2005; Wadsworth & Owens, 2007). Atienza and Stephens (2000) showed that interactions with a supervisor and a close coworker were associated with the well-being of daughters who provided care to a parent. In addition, Lapierre and Allen (2006) reported that family-supportive supervision was negatively related to time-based and strain-based work conflict with family. Frone et al. (1997) and Thompson and Prottas (2005) also reported that coworker support was negatively associated with work–family conflict. CIW and WIC are types of role conflict that are associated with social support as a coping strategy, and caregiving burden and work burden are types of emotional strain often experienced by employed caregivers. As such, the following hypotheses were posited:

Hypothesis 3a: Instrumental caregiving support from family and friends will be negatively associated with CIW.

Hypothesis 3b: Instrumental caregiving support from family and friends will be negatively associated with caregiving burden.

Hypothesis 4a: Emotional workplace support will be negatively associated with WIC.

Hypothesis 4b: Emotional workplace support will be negatively associated with work burden.

Role Conflict and Role Strain

The scarcity model of role theory (Goode, 1960) suggests that individuals have limited personal resources, such as time and energy, to fulfill their various roles; the competing demands hypothesis (Stephens & Franks, 1999) takes a similar view. Where different roles create competing demands, role conflict may result, which in turn leads to role strain, where individuals experience burden, exhaustion, and tension due to the requirements of their various roles. According to scarcity theory, role conflict occurs when the demands, stressors, or time commitments of the work role affect the elder caregiving role and vice versa (Frone et al., 1992; Frone & Yardley, 1996). A woman who works full-time and takes care of an elder has significant responsibilities associated with performing these two roles (Mui, 1992). These responsibilities may create both role overload, where she lacks time to perform the responsibilities, and role conflict, where she must make tradeoffs between the various roles. Although both role overload and role conflict lead to role strain (Cooper et al., 2001; Kahn & Byosiore, 1992), this article focuses on the relationship between role conflict, specifically CIW and WIC, and role strain, specifically caregiving burden and work burden. Barling (1990) and MacEwen and Barling (1991) found that working outside the home and providing care to young children caused role conflict that was related to role strain. The experience of working and providing care to an older person is frequently intense because elder care responsibilities may not be anticipated, are largely unplanned, either develop incrementally over time or occur as a result of a crisis, and tend to become more burdensome over time (Azarnoff & Scharlach, 1988; Keeling & Davey, 2008). Consistent with findings that role conflict leads to role strain (Biddle, 1986):

Hypothesis 5a: CIW will be positively associated with caregiving burden.

Hypothesis 5b: WIC will be positively associated with work burden.

So far, we have hypothesized only within-domain relationships. However, recent research suggests that cross-domain effects may exist (Ford, Heinen, & Langkamer, 2007; Huang, Hammer, Neal, & Perrin, 2004); that is, work conflict with family may have antecedents and consequences in the family domain, and family conflict with work may have antecedents and consequences in the work domain. Pearlin, Mullan, Semple, and Skaff (1990) suggested that caregivers “frequently experience cross-pressures and dilemmas at the junctures of caregiving and occupation” (p. 588), which we suggest may cause the impact of activities to overflow from one domain to the other. The competing demands hypothesis suggests that individuals who face challenges in meeting their work responsibilities may experience a decline in the quality of family life and vice versa (Frone, Barnes, & Farrell, 1994; Stephens & Franks, 1999). A competing set of hypotheses suggests relationships between domains, as follows:

Hypothesis 6a: Caregiving demands will be positively associated with WIC.

Hypothesis 6b: Caregiving demands will be positively associated with work burden.

Hypothesis 6c: Work demands will be positively associated with CIW.

Hypothesis 6d: Work demands will be positively associated with caregiving burden.

Hypothesis 6e: Instrumental caregiving support from family and friends will be negatively associated with WIC.

Hypothesis 6f: Emotional workplace support will be negatively associated with CIW.

Hypothesis 6g: CIW will be positively associated with work burden.

Hypothesis 6h: WIC will be positively associated with caregiving burden.

In addition to these direct effects, we posit that CIW and WIC mediate the relationship among demands, support, and role strain in the caregiving and work domains. Prior research has indicated that work–family conflict mediated the relationship between a number of work and family antecedents and outcomes (Greenhaus, Collins, Singh, & Parasuraman, 1997; Guerts, Kompier, Roxburgh, & Houtman, 2003; O’Driscoll, Ilgen, & Hildreth, 1992; Thomas & Ganster, 1995). We thus test the following mediation hypotheses:

Hypothesis 7a: CIW mediates the relationship between caregiving demands and caregiving burden.

Hypothesis 7b: CIW mediates the relationship between instrumental support and caregiving burden.

Hypothesis 7c: WIC mediates the relationship between workplace demands and work burden.

Hypothesis 7d: WIC mediates the relationship between emotional support from the workplace and work burden.

Method

Sample and Procedure

Eligibility screening questions focused on age, participation in the work force, and caregiving responsibilities. Eligible women were between the ages of 50 and 64 years, had been continuously employed for at least 6 months, and worked at least 35 hours per week. They provided significant levels of care to an older person who, without this help, would not be able to live in the community. This latter criterion was operationalized using Stone, Cafferata, and Sangl's (1987) definition of a caregiver as someone who assisted a person over age 50 years with at least one activity of daily living (ADL; e.g., bathing, feeding, and dressing) or two or more instrumental activities of daily living (IADLs; e.g., shopping, transportation, and cooking) on a daily basis, and had been doing so for at least 6 months.

Women were recruited to participate in the study using four random-digit-dial strategies: (a) 3+ list-assisted random digit dial (RDD), (b) race-targeted 3+ list assisted RDD, (c) age-targeted listed household, and (d) age-targeted and race-targeted listed household. With 3+ list-assisted RDD, two randomly generated digits are appended to a telephone number block (a block being the first eight digits of a telephone number, including area code), provided that there are at least three listed residential telephone numbers in that block. This method is considered the "gold standard" for both incidence and sample. It is generally believed to result in coverage of at least 90% of all U.S. households represented in the Electronic Database of Listed Telephone Numbers Households, which includes all phone numbers published in the electronic white pages and represents approximately 63% of U.S. households. Households not represented are those with no telephone, unlisted telephone numbers, or only cell phones. Households in which a head of household is between 50 and 64 years old were targeted. Race-targeted lists were used to ensure adequate inclusion of Black households. Contrasts using ANOVA indicated that responses from women identified using these four sources did not differ significantly in terms of the variables included in this article (data available on request). As such, they were combined into a single sample ($N = 583$) in the analyses that follow.

The proportion of the 60,993 phone numbers purchased and entered into a CATI system for each sampling strategy was determined based on calculations of working phone rates and expected study eligibility rates. Sample telephone cases were made available for calling via the CATI system, with cases introduced into the system in small batches. Each case was worked until finalization following a rubric that specified the frequency and timing of each call attempt. Depending on sampling strategy, CATI staff was able to successfully screen between 38.2% and 61.7% of all households. Of the households that were successfully screened, between 0.6% (RDD sample) and 3.5% (age-targeted and race-targeted listed household sample) included a woman who was eligible to participate in the study.

Data were collected using telephone interviews in which questions were asked of all respondents in identical order. Interviewers were trained to ask and record answers in an objective manner. Examination of the data indicated similar variance on responses throughout the survey. Respondents were given the option of stopping the survey at any time

and continuing it at another time; however, most interviews were completed within an hour, and this option was rarely exercised.

Respondents had a mean age of 55.7 years ($SD = 3.8$). The majority (76%) of the sample was White; 19% reported their race as Black, 4.8% as Hispanic, and 0.2% as something else. Slightly more than one-half of the sample (55%) was married. Education completed by the respondents included less than high school (2%), high school (22%), some college (19%), college degree (35%), and master's degree or more (22%). Personal annual income was reported as follows: less than \$25,000 (14%); \$25,000 to \$50,000 (35%); \$50,000 to \$100,000 (38%); more than \$100,000 (10%); and not reported (3%). More than one-half of the sample reported working 40 hours per week (55%), whereas 45% worked more than 40 hours a week. Most care recipients (73%) were female; their mean age was 78.4 years ($SD = 10.9$). Relationships of the care recipient to the caregiver included mother (57%), spouse or male partner (11%), father (9%), mother-in-law (7%), sibling (4%), other relative (4%), and other (8%). One third of the care recipients were living with the caregiver at the time of the study. The caregivers provided assistance with an average of 4.9 ($SD = 2.1$) IADLs and 1.2 ($SD = .9$) ADLs for the care recipients. The majority of the sample (63%) did not receive any paid help with their caregiving responsibilities. Most households (88%) did not include children aged 18 years and younger.

Measures

Caregiving demands—Caregiving demands were composed of three components: hours of care provided by the respondent each week (caregiver hours), the care recipient's ability to do seven IADLs without help (IADL ability), and the amount of help with IADL tasks that the respondent provided to the older person (caregiver tasks). We operationalized caregiver hours as the number of hours the caregiver spent providing care to the care recipient. We asked, "Now, thinking of all the kinds of help you provide for [care recipient], about how many total hours did you spend in the past week providing this help?" Examination of the univariate statistics for caregiver hours revealed good coverage over the range of endorsed responses (varying from 1 to 120 hours, median = 10 hours) but with a kurtotic distribution. This variable was log-transformed to normalize the distribution prior to including it in testing the latent construct caregiving demands. IADL ability was measured by asking the caregiver whether the care recipient was able to do IADL tasks (e.g., housework, getting to places out of walking distance, and managing his or her own money) *without any help* (2), *with some help* (1), or was *completely unable to do the activity* (0). Higher scores indicated less need for caregiving because of the care recipient's greater ability to do activities without help. We assessed caregiver tasks as the number of IADL tasks with which the respondent had helped the care recipient during the past month. Higher scores indicated that more help had been provided by the caregiver. The three variables included in this structural equation modeling (SEM) confirmatory factor analysis evidenced the following factor loadings: caregiver hours (log) (.60), IADL ability (−.65), and caregiver tasks (.83).

Caregiving support—Instrumental caregiving support was assessed with two measures. First, respondents were asked to name the people in addition to the designated caregiver who

helped the care recipient without receiving pay within the past month (informal helpers). The measure was the count of other unpaid helpers who assisted the care recipient. Second, respondents indicated the number of hours of help each of these individuals provided. The measure (informal help hours) was the total number of hours of unpaid help received by the care recipient from anyone other than the identified caregiver. Examination of the univariate statistics for informal help hours revealed that it had a skewed distribution with a cluster of respondents reporting zero hours of informal help (range 1–130, median = 7 hours). This variable was square-root-transformed to normalize the distribution and then used in subsequent analyses. SEM confirmatory factor analysis evidenced the following loadings: informal helpers (.71) and informal help hours (square root; .81).

Work demands—Work demands were measured with the five-item psychological job demands scale (job demands) taken from Karasek's (1985) *Job Content Questionnaire*; this scale was selected because its content was considered to have the greatest relevance to work–caregiving conflicts and because of its widespread use (Hurrell, Nelson, & Simmons, 1998). The items include “My job requires working very fast,” “My job requires working very hard,” “I am not asked to do an excessive amount of work” (reverse coded), “I have enough time to get the job done” (reverse coded), and “I am free from conflicting demands that others make” (reverse coded). Each item was rated on a 6-point scale from *completely disagree* (1) to *completely agree* (6). Higher scores indicated greater feelings that the workplace placed higher demands on the respondent.

Work support—Emotional workplace support included two components: supervisor support and coworker support. Supervisor support was assessed with a four-item scale developed using three items from Clark's (2001) measure of family-sensitive supervision and one item from Voydanoff's (2004) measure of supervisor work–family support. Items include “My supervisor understands my caregiving demands,” “My supervisor listens when I talk about my caregiving responsibilities,” “My supervisor acknowledges that I have caregiving obligations,” and “I feel comfortable bringing up the issue of my caregiving responsibilities with my supervisor.” Respondents rated each item on a 6-point scale from *completely disagree* (1) to *completely agree* (6). Higher scores reflected more supervisor support. Coworker support was assessed using a parallel four-item scale and identical response format. These variables evidenced the following loadings: supervisor support (.67) and coworker support (.44).

Role conflict—Measures of CIW and WIC were based on questions developed by Netemeyer, Boles, and McMurrian (1996) and Carlson and Frone (2003). These measures were created using a pool of 20 parallel questions from caregiving and work domains representing role conflict, 10 representing CIW and 10 representing WIC. Examination of the bivariate correlations indicated patterns in the expected direction (CIW items were more highly correlated with one another, and WIC items were more highly correlated with one another). Exploratory factor analysis (EFA) with varimax rotation was applied to all WIC and CIW items to examine the degree to which these newly adapted items distinctly represented the underlying constructs. The EFA yielded very clear and consistent loadings

on two factors, one with seven items in the caregiving domain (ranging from .64 to .80) and another with seven parallel items in the work domain (ranging from .64 to .76).

Sample items for CIW include “The demands of my caregiving responsibilities interfere with my work-related responsibilities,” “The time my caregiving takes up makes it difficult for me to fulfill my work-related responsibilities,” and “My caregiving responsibilities produce stress that makes it difficult for me to fulfill my work-related responsibilities.” Sample items for WIC include “The demands of my work interfere with my caregiving responsibilities,” “The time that my job takes makes it difficult to fulfill my caregiving responsibilities, and “The things I want to do to help [care recipient] do not get done because of the demands my job puts on me.” Respondents used a 6-point Likert-type scale ranging from *completely disagree* (1) to *completely agree* (6). Higher scores indicated more conflict. There were few missing data, and the distributional properties revealed good coverage over the range of responses.

Role strain—Caregiving burden was assessed using the nine-item measure developed by Lawton, Kleban, Moss, Rovine, and Glicksman (1989). Caregivers were asked to report on negative feelings resulting from dealing with the care recipient’s needs (e.g., “Helping your care recipient gives you a ‘trapped’ feeling,” “Feeling isolated and alone as a result of helping your care recipient,” “Feeling that you have lost control of your life because of helping your care recipient,” “Your health has suffered because of the help you must give your care recipient”). These feelings represent the emotional costs associated with fulfilling the role of caregiver. Responses were measured using a 5-point rating scale assessing how frequently respondents experienced each feeling, ranging from *never* (1) to *nearly always* (5), with higher scores reflecting greater burden.

Work burden was assessed using six items from the widely used nine-item Work Emotional Exhaustion Scale (Maslach & Jackson, 1986). This scale included ratings of how often the emotional effects of work were experienced. Items included “I feel emotionally drained from my work,” “I feel used up at the end of the workday,” “I feel fatigued when I get up in the morning and have to face another day on the job,” “Working all day is really a strain for me,” “I feel I’m working too hard on my job,” and “Working puts too much stress on me.” Respondents rated each item on a 6-point scale from *completely disagree* (1) to *completely agree* (6). Higher scores indicated greater work burden.

Data Analysis Plan

Preliminary analyses examined the extent to which four variables influenced the model: whether the caregiver worked more than 40 hours a week (dichotomized due to severe nonnormality), whether the caregiver’s household had a member younger than 18 years, the level of household income, and whether the care recipient received paid help. Because none of these variables significantly affected the model, they were not included in subsequent analyses.

Hypotheses were tested using AMOS 18.0 (Arbuckle, 2009). The measurement errors (residual error of the respective latent constructs) between CIW and WIC were allowed to be correlated. Because the proposed model was complex, measurement error was estimated

(rather than combining measurement and structural models in one analysis), enabling single indicators of model elements to be used rather than multiple indicators, as recommended by Liang, Lawrence, Bennett, and Whitelaw (1990). Similar procedures were suggested by Hayduk (1987), who indicated that measurement errors should routinely be fixed in SEM. The procedures for adjusting measurement error included using the formula developed by Werts, Linn, and Joreskog (1974) and Wheaton, Muthen, Alwin, and Summers (1977), in which the measurement error variances are fixed as “variance times (1 – reliability).” These procedures result in squared multiple correlations that are equal to the reliability estimates and correct for known unreliability among measured variables.

Adequacy of model fit was assessed by examining the comparative fit index (CFI), the Tucker–Lewis index (TLI), the root-mean-square error of approximation (RMSEA), and the Hoelter index. Desirable models yield CFI and TLI indices with values greater than .90, RMSEA less than .08, and Hoelter values of at least 200 but not lower than 75. The chi-square/*df* ratio was also used. It is suggested that a chi-square not larger than 2 to 5 times the degrees of freedom is acceptable (Bollen & Long, 1993).

Results

Table I displays the means, standard deviations, and zero-order correlations among all variables for the sample. Internal consistencies for scales are shown on the diagonal of the correlation matrix.

Hypothesis Testing

The initial test of the model, depicted in Figure 1, indicated a model fit as follows: CFI = .901, TLI = .82, RMSEA = .086, Hoelter = 154 ($p = .05$), chi-square/*df* ratio 216.257/40 = 5.406. All paths were significant with the exception of the following four: from CIW to work burden, from instrumental caregiving support to WIC, from caregiving demands to work burden, and from caregiving demands to WIC. These paths were removed from the model, one at a time. The fit of the model did not change substantially (CFI = .901, TLI = .825, RMSEA = .083, Hoelter = 161 [$p = .05$], chi-square/*df* ratio 219.693/44 = 4.993). Table 2 presents unstandardized and standardized parameter estimates from this final model, which is depicted in Figure 2.

We tested mediation by removing the direct paths from caregiving demands and supports to caregiving burden, and from work demands and work supports to work burden. This resulted in a decrement in fit. Specifically, the chi-square rendered was 405.123 (49) as compared with 219.693 (44) in the final model.

Discussion

This study makes three important contributions to the literature. First, research on work–family conflict is extended to the growing population of middle-aged and older employed women with significant elder caregiving responsibilities. Second, related aspects of the job demands–resources model (Bakker & Demerouti, 2007; Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003), the transactional–coping model (Cunningham & De La Rosa,

2008; Forsythe & Compas, 1987; Parker & Endler, 1996), and the scarcity model and competing demands hypothesis (Goode, 1960; Stephens & Franks, 1999) are integrated, yielding new information about how demands and supports from the work and family domains affect role strain. Finally, evidence is provided that role conflict is part of the underlying process that explains how demands and supports are associated with role strain, contributing to the debate on work and nonwork cross-domain effects.

Findings from these analyses provide support for a bidirectional view of work–caregiving conflict, that is, WIC and CIW, as results show evidence of two distinct constructs with unique antecedents and consequences. As a whole, the results suggest that caregiving demands and work demands are stressful for older working women. Workplace demands have an overall impact, predicting CIW and WIC, caregiving burden, and work burden. In contrast, the impact of caregiving demands is limited to the family domain. Together these demands create significant work–caregiving conflict as well as significant distress for older working women. These results add to the existing literature about caregiver and workplace demands experienced by older women. They suggest that workplace demands have broad and far-reaching effects that influence not only work role strain but also caregiving role strain. Work may be more central to the identity of older women, increasing its impact on other life domains and creating attitudinal and behavioral challenges when caregiving responsibilities increase.

These results highlight the importance of social support in reducing stress both inside and outside the workplace (Cohen & Wills, 1985; House, 1981) for older women with caregiving responsibilities. The negative associations of instrumental caregiving support with caregiver burden, and of emotional workplace support with work burden, indicate the need for social support in alleviating such negative outcomes. The model also shows that WIC may act as a partial mediator between workplace support and work burden, further illuminating the process through which social support reduces work burden. Stress reduction is important for caregivers, and even more so for those with significant work responsibilities. The quality of both caregiving and work likely improve as stress is reduced, making the value of support in both work and family domains very significant.

The preponderance of research indicates that the antecedents and consequences of work–family conflict remain in the same domain. Frone, Russell, and Cooper (1994) argue that the congruence effect among domains is more predominant than any spillover effect in family and job satisfaction. Despite earlier findings of domain-specific antecedents for work-to-family conflict and family-to-work conflict, there is a less consistent pattern for their consequences (Frone et al., 1992). Our research supports only within-domain effects for CIW. Neither caregiving demands nor support affected WIC, and CIW was positively associated with caregiver burden but not work burden, suggesting that these types of demands and support do not penetrate the work arena. Boyar, Maertz, Mosley, and Carr (2008) found a similar relationship for work and family demands both to work interfering with family and to family interfering with work.

Recent research suggests that cross-domain effects may exist (Ford et al., 2007; Huang et al., 2004); that is, work interfering with family may have antecedents and consequences in the

family domain, and family interfering with work may have antecedents and consequences in the work domain. Our research indicates that workplace demands and support affect both WIC and CIW, suggesting the more encompassing impact of the workplace. Workplace support appears to be particularly helpful in reducing work–caregiving conflict, as reflected in its negative association with both CIW and WIC. As Greenhaus and Parasuraman (1999) argue, a supportive work environment may facilitate the integration of work and family roles. Supportive supervisors and coworkers can create more flexibility in the workplace, disseminate information to caregivers, or provide direct assistance that aids in reducing work–caregiving conflict. Similarly, WIC was significantly, positively associated with both work burden and caregiver burden. These results suggest that WIC has a more potent effect, one that reaches into both the work and family domains. Such an effect may exist because it is more difficult to delegate work responsibilities to others, even when both supervisors and coworkers are supportive. It may also be easier to gain additional assistance around caregiving than around work responsibilities. Obtaining either paid or unpaid help from others in the caregiving domain can create support for caregiving activities that cannot be created for work activities.

The commitment of the women to full-time work may also explain the crossover from work to caregiving. As suggested above, work may be more central to their identity, increasing in its impact on other life domains. Studies show that women are more likely to stop caregiving than leave the labor force (Moen et al., 1994) and more likely to reduce their hours spent on caregiving than work hours (Dauzenberg et al., 2000). Of course, leaving the work force is a significant step, and caregivers may take less dramatic ones, such as reducing their work hours, moving from full-time to part-time employment, or seeking more flexible work hours. The fact that work demands affected CIW highlights their importance for understanding role conflict. The significant crossover from WIC to caregiving burden also highlights the central role that WIC plays for caregivers. Unlike the relationship between work demands and role conflict, however, higher levels of conflict from work to caregiving increase both caregiving burden and work burden.

In addition to its theoretical contributions, this research has significant practical implications. The extent to which supervisors and coworkers provide support that is influential has received only limited examination. It is likely that emotional workplace support at a minimum, perhaps coupled with instrumental caregiving support, would reduce work–family conflict and the resulting role strain both in the work and family domains. Organizations can encourage supervisors and coworkers to provide such support by modifying their reward systems to reinforce supportive behaviors and by offering training to supervisors and coworkers about how to effectively provide such support to caregivers. If supervisors and coworkers understand the types of issues created by elder caregiving responsibilities, they can better offer support to employees in their daily work activities. In this way organizations will encourage the types of behaviors that ultimately result in reduced caregiving burden and reduced stress for employees with elder caregiving responsibilities.

Limitations and Future Directions

This study, as all studies, has limitations. The cross-sectional study results reported here present only a single snapshot of the antecedents and outcomes of WIC and CIW for older women. Without measuring changes in demands and support over time, the directional effects of these relationships cannot be assessed. For example, it is possible, although less likely, that CIW and WIC are antecedents rather than consequences of social support. Similarly, role strain could cause CIW and WIC, as well as social support, rather than being consequences of them. Longitudinal analyses would help verify the direction of these relationships. Although we did not find strong evidence of CIW and WIC mediating relationships among demands, support, and role strain, such possibilities call for further study; some have suggested that the relationships among caregiving, role conflict, and well-being are complex and reciprocal (Stephens, Townsend, Martire, & Druley, 2001). Research by Innstrand, Langballe, Espnes, Falkum, and Aasland (2008), for example, found lagged effects of work–family conflict on burnout, suggesting that both WIC and CIW might also have lagged effects on role strain. Future research should include longitudinal studies that examine the long-term dynamics of these relationships. Not only can the lagged effects be tested but also the evolution of demands and support, and their relationships to role conflict and role strain, over time can be tracked. If these associations change over time, strategies for managing caregiving relationships of various durations may similarly need to change.

The results also are somewhat limited by the measures used to represent each construct. Although there are parallel measures of role conflict, different variables represent caregiving and work demands. Although CIW and WIC are measured independently, the similarity of the items might create problems for respondents in distinguishing the direction of the influence. In addition, the self-reported nature of all measures is limiting, and the internal reliabilities of selected scales, specifically workplace demands, are of concern. Obtaining more objective information about demands, such as daily diaries maintained by respondents, might improve the reliability and validity of the measures.

This study focused on two informal sources of support likely to be available to women across organizations, emotional support from supervisors and coworkers and unpaid instrumental support from family and friends. In both cases, such support was limited to support of providing care for an elder. In selecting these variables, other sources were excluded, including emotional caregiving support from family and friends, paid instrumental support, and instrumental support from the workplace. Future research might include all sources and types of support simultaneously so as to more fully understand the associations among demand, support, role conflict, and role strain in the work and family domains, as well as the cross-domain impact of both work and caregiving support. Future research should also allow the disentangling of the effects of emotional versus instrumental support within and across domains. In addition to the practical implications of such research, these analyses may yield other suggestions for improving work–life programs for those with elder care responsibilities.

The use of a random sample of respondents is a major strength of this study and increases its potential generalizability. However, future research should still examine our conceptual model using different samples. Such samples should include, for example, individuals in

selected industries and at selected job levels and individuals for whom the nature and intensity of the work and caregiving experience vary. Following the work of Neal and Hammer (2007), consideration of the special issues faced by the sandwiched generation would be fruitful. The experience of middle-aged and older men who must balance work and caregiving roles is also important to investigate, especially since the growing demand for caregivers is likely to thrust more men into these dual roles. The samples for such research should ensure that large numbers of Hispanics are included, and analyses of different ethnic and racial groups should be the focus of future research. Reliance on random-digit-dial sampling procedures will become increasingly problematic if they do exclude those lacking landline telephone service. Finally, future research should examine the influence of background characteristics, such as income, education, and length of time as caregiver.

Despite these limitations, results from this study shed new light on the experiences of older women who both work outside the home and provide unpaid care to an older person. As the number of these women grows over the next decade and pressure for them both to work and provide care increases, greater understanding of the challenges they face and the decisions they make will become even more vital.

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Figure 1.
Theoretical model

Figure 2.
Final model with parameter estimates

Table 1.

Means, Standard Deviations, Correlations, and Reliability Coefficients ($N = 583$)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
Caregiving demands														
1. Caregiver hours (log)	2.3	1.1	—											
2. IADL ability	8.5	4.4	-.344**	—										
3. Caregiver tasks	4.5	2.1	.496**	-.558**	—									
Instrumental caregiving support														
4. Informal helpers	1.5	1.4	-.167**	-.063	-.010	—								
5. Informal help hours (sqrt)	4.3	3.0	.078	-.331**	.150**	.580**	—							
Work demands														
6. Job demands	14.1	5.6	.009	-.067	.062	.051	.089*	.66						
Emotional workplace support														
7. Supervisor support	20.7	4.3	-.080	.035	-.066	.086	.028	-.154**	.87					
8. Coworker support	21.1	3.5	.023	-.033	-.052	.027	.020	-.105*	.294**	.88				
Role conflict														
9. CIW	15.9	7.9	.205**	-.191**	.230**	-.062	-.026	.264**	-.276**	-.208**	.91			
10. WIC	18.7	9.2	.050	-.073	.101*	-.015	.011	.318**	-.327**	-.180**	.583**	.91		
Role strain														
11. Caregiving burden	9.4	7.3	.349**	-.226**	.321**	-.188**	-.111**	.222**	-.254**	-.180**	.515**	.423**	.89	
12. Work burden	16.7	7.1	.028	-.013	.024	-.038	-.031	.489**	-.296**	-.202**	.360**	.511**	.419**	.86

Note: CG = caregiver; CR = care recipient; IADL = instrumental activities of daily living; CIW, caregiving interferes with work; WIC, work interferes with caregiving. Internal consistencies are shown on the diagonal of the correlation matrix.

* $p < .05$.

** $p < .01$.

Table 2.

Parameter Estimates from the Final Model

	Estimates	SE	Critical Ratio	Standardized Estimates
Caregiving demands				
CIW	2.920	0.491	5.944	0.250
Caregiving burden	3.825	0.518	7.390	0.355
Instrumental caregiving support				
CIW	-.675	0.307	-2.198	-0.088
Caregiving burden	-1.666	0.309	-5.387	-0.237
Work demands				
CIW	0.408	0.069	5.931	0.272
WIC	0.592	0.081	7.268	0.336
Caregiving burden	0.167	0.059	2.839	0.121
Work burden	0.628	0.062	10.108	0.474
Emotional workplace support				
CIW	-1.628	0.385	-4.229	-0.343
WIC	-2.329	0.502	-4.638	-0.419
Work burden	-0.971	0.324	-2.995	-0.232
CIW				
Caregiving burden	0.252	0.050	5.071	0.274
WIC				
Caregiving burden	0.179	0.041	4.348	0.227
Work burden	0.234	0.044	5.364	0.311
Covariances				
CIW error and WIC Error	24.255	7.01	3.46	0.526
R^2				
Observed variable	R^2			
WIC	.288			
CIW	.262			
Caregiving burden	.497			
Work burden	.535			

Note: CIW = caregiving interferes with work; WIC = work interferes with caregiving.