

Something's Gotta Give: The Relationship Between Time in Eldercare, Time in Childcare, and Employee Wellbeing

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Abstract

While existing research indicates that “sandwiched” employees (those with both childcare and eldercare demands) have lower wellbeing than employees with only eldercare demands, there is little understanding how childcare and eldercare demands interact to create those differences. Drawing on two studies, we hypothesize childcare demands amplify the negative impact of eldercare demands on wellbeing. Study 1 operationalizes childcare as a dichotomous variable (i.e., has childcare or not), and examines the relationship between hours per week in eldercare and wellbeing for two groups of employees: those with eldercare and those in the sandwich generation. Study 2, which operationalizes childcare as a continuous variable (i.e., hours in childcare per week), explores how time in childcare moderates the relationship between time in eldercare and wellbeing. Findings show time in eldercare is negatively associated with wellbeing, and the impact of childcare on the relationship between time in eldercare and wellbeing is dependent on how one operationalizes wellbeing and childcare constructs.

Keywords

resource theory, caregiving, stress, depression, caregiver strain, family-role overload

As the population ages, there is a growing number of people who balance providing eldercare (i.e., caregiving) with satisfying their other commitments, including full-time jobs and childcare (Clancy et al., 2020; Duxbury & Dole, 2015; Duxbury & Higgins, 2017). Increasing post-graduate education rates, changing fertility patterns (e.g., having children later in life, reduction in birthrate), and increasing life expectancy rates have meant that many individuals now spend a smaller portion of their lives raising young children and more time caring for elderly dependents (DePasquale et al., 2016, 2018; Duxbury & Dole, 2015; Ruppanner & Bostean, 2014). These trends suggest that, in the future, more organizations may face situations where employees are spending less time at work and more time at home dealing with eldercare issues (Clancy et al., 2020; Schoen, 2015).

In recent years, there has been an upswing in the number of studies focusing on the relationship between eldercare and numerous interrelated outcomes including caregiver burden, caregiver health, wellbeing, and strain on family life (Burch et al., 2019; Clancy et al., 2020; Revenson et al., 2016). This body of research shows that the eldercare role is considerably different than the parental role. While childcare has a fairly predictable pattern with children becoming less dependent on parents as they get older, eldercare is unpredictable, varies in duration, and tends to increase in amount and intensity over

time as the care recipient ages (Calvano, 2013; DePasquale et al., 2016, 2018; Duxbury & Higgins, 2017; Moen & DePasquale, 2017; Pavalko & Gong, 2005). These differences challenge researchers seeking to explore the relationship between eldercare and wellbeing for those balancing care for an elderly dependent, paid employment, and childcare (Duxbury & Higgins, 2017).

While there is a growing body of literature to suggest the wellbeing of sandwiched employees (employees engaged in both childcare and eldercare) may differ from that of employees who provide only eldercare (DePasquale et al., 2016, 2018; Halinski et al., 2018; Halinski et al., 2020), there has been little research exploring how childcare and eldercare demands interact to create those differences for caregivers (Duxbury & Higgins, 2017). Some researchers have found that the combination of childcare and eldercare may be additive and lead to worse outcomes for sandwiched caregivers

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(e.g., Lee et al., 2010; DePasquale et al., 2016; 2018; Do et al., 2014). Other researchers argue that childcare may buffer the relationship between eldercare and employee wellbeing resulting in worse outcomes for eldercare providers without childcare (e.g., Burch et al., 2019; Clancy et al., 2020; Duxbury et al., 2011) in comparison to their sandwiched counterparts. Methodological differences that can be attributed to disagreements amongst researchers on how to operationalize eldercare may help explain inconsistent findings (Burch et al., 2019; Calvano, 2013; Clancy et al., 2020).

This paper seeks to address these gaps in our understanding. Drawing from resource theories (Edwards & Rothbard, 2000; Hobfoll et al., 2018), this research posits that childcare and eldercare demands drain resources and hypothesizes that childcare demands amplify the negative impact of eldercare demands on employee wellbeing (i.e., stress, depressed mood, caregiver strain, family-role overload). This hypothesis is tested over the course of two studies, each of which operationalize the childcare construct differently. Study 1 operationalizes childcare as a dichotomous variable (i.e., has childcare: yes or no) and examines the relationship between hours per week in eldercare and four wellbeing indicators for two groups of employees: (1) those who provide childcare as well as eldercare (i.e., those in the sandwich group), and (2) those who provide eldercare-only. Study 2 operationalizes childcare as a continuous variable (i.e., hours in childcare per week) and explores the extent to which time in childcare moderates the relationship between time in eldercare and employee wellbeing for those in the sandwich generation.

A number of literature reviews exploring the impact of eldercare responsibilities (Burch et al., 2019; Calvano, 2013; Clancy et al., 2020) and/or sandwich-care responsibilities (Burke, 2017; DeRigne & Ferrante, 2012; Duxbury & Dole, 2015; Duxbury & Higgins, 2017; Neal & Hammer, 2007; Neal et al., 2013) on work, work-life, and wellbeing outcomes of employed informal caregivers have recently been published. These reviews, which span multiple social science disciplines, provide considerable empirical evidence that combining work with the provision of eldercare negatively impacts individual employees and their employers in a myriad of different ways. Our research contributes to this literature in several ways.

First, this paper, which explores how balancing work and eldercare impacts wellbeing for employees with and without children, addresses Clancy et al.'s (2020, p. 22) observation that the lack of research comparing the experiences of those with different caregiving relationships "such as those with just childcare versus those with just eldercare and those in the sandwich generation" was highly problematic. By investigating the impact caregiver type (i.e., eldercare only, sandwich generation) has on the relationship between eldercare demands and employee wellbeing, the findings from this study augment an existing literature that has tended to focus on balancing work and childcare (Burch et al., 2019; Calvano, 2013; Duxbury & Higgins, 2017; Greenhaus & Powell, 2006). Our study also responds to recent

recommendations that research be done to investigate the complexities of dealing with multiple family boundaries (Piszczek, 2017) and examine caregiving trade-offs over an employee's life course (Moen & DePasquale, 2017). Such a study is timely, given the demographic data showing that the number of employees in the sandwich generation is substantive and growing (Clancy et al., 2020; DePasquale et al., 2018; Duxbury & Higgins, 2017).

Our research also informs research methodology in the work-life literature in two ways. First, as this research provides insights into how the operationalization of a construct (i.e., childcare) may shape work-life outcomes. Second, this research's focus on eldercare hours informs discussions on how eldercare is defined and on the underlying problems with sample selection in the eldercare field. In her 2013 review, Calvano identifies multiple methodological challenges facing researchers who wish to study caregivers. She notes that there is no consensus amongst researchers on how to operationalize eldercare based on how many hours an employee spends in these roles. Researchers who choose a low cut-off point run the risk of type I errors, while those who set their selection criteria too high may find their samples very small and results not generalizable (Calvano, 2013). This study, which examines the relationship between hours in eldercare and four important wellbeing outcomes for two types of caregivers (eldercare only, sandwich), using two different indicators of childcare demands (hours in childcare per week, spend time each week in childcare: yes/no) was designed to inform this issue.

Resource Theory

Resource theories such as the Resource Drain Theory (Edwards & Rothbard, 2000) and Conservation of Resources (COR) Theory (Hobfoll et al., 2018) are based on the premise that a minimum resource threshold of resources is necessary for performance, with increasing difficulty arising as demands increase and outweigh the available resource pools. While resource theories have been used to understand a variety of different phenomena, a constant theme across all disciplines is that resources are key determinants of performance, adaptation, and change (Hobfoll, 1998). COR theory emerged from and extends resource and psychosocial theories of stress (Alvaro et al., 2010) by acknowledging that stress stems from the combined effect of the subjective perception of an event as taxing or exceeding available resources (Lazarus & Folkman, 1984) and the objective environmental circumstances that threaten or cause depletion of people's resources (Alvaro et al., 2010). Also relevant is Hobfoll's (2010) claim that the accumulation of resource losses is more powerful and rapid than the buildup of equivalent resource gains. In this paper, we use resource theories to argue that caregivers who spend significantly more hours per week providing eldercare have fewer resources available to cope with issues at work and home and, as a result, are more likely

to report mental health issues, family-role overload, and caregiver strain.

Resources are loosely defined as “objects, states, conditions, and other things that people value” (Halbesleben et al., 2014, p. 1334). The value attached to a particular resource depends upon the individual and the extent to which the resource increases fit between a person and his/her environment (Halbesleben et al., 2014). ten Brummelhuis and Bakker (2012, p. 548) categorize resources along two dimensions: the source of the resource (contextual vs. personal), and the extent to which resources can be considered transient (volatile vs. structural). Of relevance to this study is a type of resource called “energies”—personal resources (inherent in a person such as mood, physical/cognitive energy, attention) with a high degree of volatility (transitory resources such as time or physical energy can be depleted and temporal resources such as mood or attention reflect psychological states that come and go) (ten Brummelhuis & Bakker, 2012)

“Energies” such as time, energy and attention can be considered to belong to the same “resource caravan”—a bundle of resources that typically occur together (Halbesleben et al., 2014; Hobfoll, 2001). A person who has more energy (i.e., the physical and mental strength to do something) should, for example, be able to work more efficiently thus saving time (a personal resource). This additional time could make it easier for a person to give attention (i.e., concentrate/focus) to the performance of a particular role, thereby getting more accomplished in a given time period. This could result in a sense of accomplishment which could in turn, result in an individual feeling energized and abler to focus.

The COR Model (Hobfoll et al., 2018) classifies time and energy as key resources that individuals pursue/seek to preserve and argues that stress occurs when there is either a loss of resources or such loss is threatened (Halbesleben et al., 2014). As time (and energy to some extent) is a fixed resource, excessive hours in one role-related activity inevitably decreases the time that can be devoted to another role which can result in resource loss. Hobfoll (1989) posits that because resources (e.g., time, energy) “are lost in the process of juggling both work and family roles” (p. 352), the maintenance of multiple roles is a resource drain. While Hobfoll referred to multiple work and family roles, our study focuses on employees who are managing multiple family roles (i.e., parenting, eldercare). We posit that the provision of childcare consumes caregivers’ resources (the greater the amount of time needed to manage childcare responsibilities the greater the depletion of resources), which results in fewer resources (i.e., time, energy, attention) available for eldercare and work obligations. Our hypothesis is consistent with research done by Boumans and Dorant (2014), which found that among double-duty elder caregivers, employee wellbeing was negatively associated with the amount of time an individual spent in family care. It is also supported by DePasquale et al.’s (2018) research showing that perceived

family time adequacy (the extent to which individuals feel they have enough time to spend with family members) is a salient psychological resource for those with childcare and or eldercare who are squeezed for time.

Halbesleben et al. (2014) note that the measurement of resources is a key challenge associated with the application of COR theory. In this study, we follow common practice and identify a small subset of relevant resources (e.g., engage in childcare, time in childcare, time in eldercare), which we measure using currently accepted methodologies. While this approach has the advantage of greater efficiency, it takes away our ability to examine how resources interact (e.g., resource caravans) to impact wellbeing over time (Halbesleben et al., 2014, p. 1355).

Theoretical Framework: Study I

The analysis for Study I is theoretically grounded using the framework portrayed in Figure 1, which posits that eldercare hours per week will be positively associated with perceived stress, depressed mood, caregiver strain, and family-role overload, regardless of caregiver type. The choice of these indicators of four employee wellbeing indicators is consistent with much of the research in the domain which has operationalized employed caregiver wellbeing using any or all of these constructs (Burch et al., 2019; Calvano, 2013; Carlson et al., 2010; Clancy et al., 2020; Duxbury & Higgins, 2017; Fast et al., 2013).

Resource drain theory (Edwards & Rothbard, 2000) supports the idea that the hours in eldercare per week will be positively related to perceived stress, depressed mood, caregiver strain, and family-role overload. According to this theory, as the demands of the caregiver role intensify and the number of hours per week the caregiver is required to devote to this role increases, the caregiver may be required to transfer time and energy from another domain (i.e., work, personal pursuits) to meet eldercare demands. Time, energy, and attention are considered to be finite resources. As such, this transfer process is likely to result in a reduction of the amount of time and energy available for competing roles (i.e., employment, parenting) and an upswing in the likelihood that other role demands will be unmet (Edwards & Rothbard, 2000).

Lazarus & Folkman (1984) model of stress and coping also supports the idea that individuals whose role demands exceed their ability to cope typically suffer from poorer mental health in the form of psychological (or perceived) stress (Cohen et al., 1983; Lazarus & Folkman, 1984; Pearlin et al., 1990) and caregiver depression, defined as behavioral and emotional depressive symptoms (e.g., sadness, loss of energy) experienced as a result of the caregiver role (Pinquart & Sörensen, 2003b). Pearlin et al. (1990) note that employees who spend more time in care are more likely to be looking after family members with increasing frailty who require higher levels of emotional and social support. Caregivers

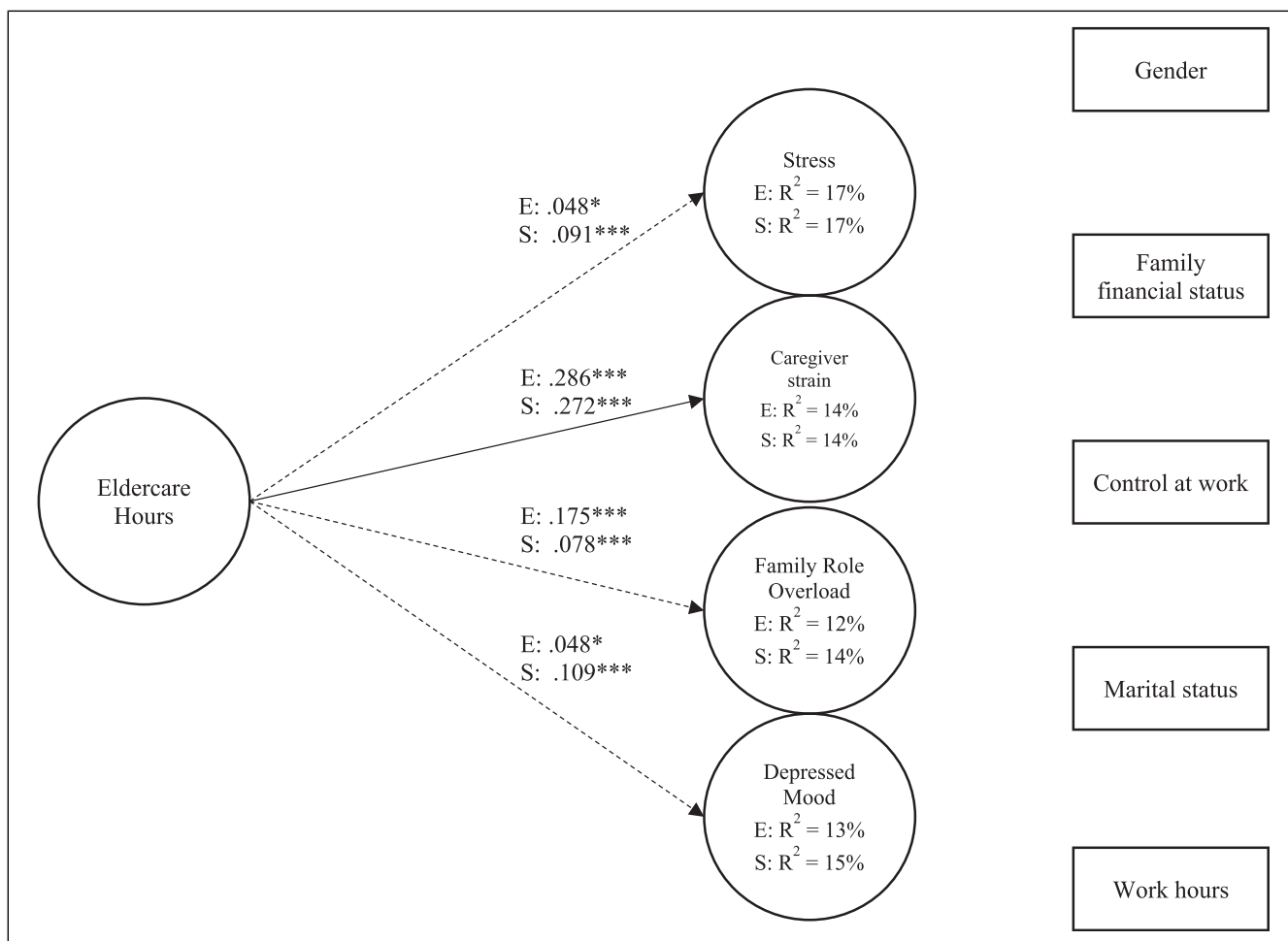


Figure 1. Study I: Theoretical Model and Results.

Note. $N_e = 2508$. $N_s = 2616$. *** $p < .001$. * $p < .05$. Dashed lines represent path loadings that are significantly different across samples. Rectangles represent control variables. Gender, control at work, and family financial status are significant at *** with all outcome variables. Marital status and work hours were not significant in this analysis.

providing care to the fragile elderly are more likely to become exhausted, less able to cope by transferring finite resources from one domain to another, and more likely to experience depressed mood, stress, and anxiety (Pearlin et al., 1990). These effects are consistently documented in research that investigates the relationship between hours in eldercare and caregiver stress and depression (Pavalko & Gong, 2005; Pearlin et al., 1990; Pinquart & Sörensen, 2003a, 2003b; Sinha, 2013).

Caregiver strain is a multidimensional construct which is defined in terms of enduring financial, emotional, and/or physical difficulties or changes in caregivers' day to day lives that can be attributed to the need to provide care (Robinson, 1983). Financial, emotional, and physical resources can all also be considered to be finite resources, the transfer of which can limit role performance and wellbeing in the resource receiving domain as well as in the drained domains (Edwards & Rothbard, 2000). We expect that the

need to transfer resources from another domain and role will be positively associated with the amount of time committed to eldercare and hence increased perceptions of caregiver strain. The idea that eldercare hours are positively associated with caregiver strain is supported by a study of the factors affecting caregiver strain for caregivers of stroke patients (Bugge et al., 1999), as well as research linking caregiver hours and deterioration in caregiver's physical and emotional health Boumans & Dorant, (2014).

Family-role overload occurs when the sum of the time and energy demands associated with an employee's family roles (e.g., caregiver, parent, spouse) overwhelms the employee's ability to cope (Elloy & Smith, 2003; Kahn et al., 1964). Increasing time demands from the eldercare role should lead to an increased perception of family-role overload, a hypothesis that is consistent with both COR (Hobfoll, 1989) and resource drain (Edwards & Rothbard, 2000) theories. Based on the arguments, we hypothesize that:

H1: Eldercare hours is positively related to (a) perceived stress, (b) depressed mood, (c) caregiver strain, and (d) family-role overload, regardless of caregiver type (i.e., eldercare only, sandwich generation).

Impact of Caregiver Type: Sandwich Generation versus Eldercare-only

Study 1 explores the extent to which the relationship between eldercare hours and each of the four indicators of employee wellbeing included in our model will differ by caregiver type (i.e., sandwich generation, eldercare-only). Resource drain theory, the role scarcity hypothesis, and COR all support the idea that the demands placed on the employed caregiver from having to juggle two (rather than one) dependent care roles will increase the likelihood that they will be drained of resources (particularly in the family domain) and have more difficulty coping with heavier time commitments to the role of caregiver. These challenges will, we posit, be reflected in a stronger relationship between eldercare hours and all four indicators of employee wellbeing for sandwich than for eldercare-only caregivers.

Empirical research on the relationship between work, eldercare, and childcare is relatively sparse (Boyczuk & Fletcher, 2016; Calvano, 2013; Clancy et al., 2020). There is, however, evidence that childcare and eldercare responsibilities may affect the wellbeing of employee caregivers differently. Lee and colleagues' (2010) research, for example, linked multigenerational caregiving responsibilities to higher levels of family to work conflict. Lee et al. (2010) also reported that sandwich caregiving also has a greater impact on self-reported work outcomes (e.g., job satisfaction) than the singular eldercare-only role. Similar results were obtained by DePascale and colleagues (2016) who found that triple-duty carers (i.e., health care workers in the sandwich generation) reported greater work-life conflict and psychological distress than their double-duty counterparts (i.e., health care workers with children, health care workers with eldercare). These studies support the idea that increases in dependent care hours are associated with decreases in employee wellbeing. Finally, research by Rubin and White-Means (2009) found sandwiched caregivers are significantly more likely to work fewer hours than they want to, compared to other caregivers. These findings support the idea that sandwich caregivers will be more likely to drain time resources from work to manage their eldercare and childcare roles. Thus,

H2: The positive association between eldercare hours and (a) perceived stress, (b) depressed mood, (c) caregiver strain, and (d) family-role overload is stronger for employees in the sandwich generation than for employees in the eldercare group.

Theoretical Framework: Study 2

Study 2 explores whether childcare demands amplify the negative effects of eldercare demands on caregiver wellbeing.

However, unlike Study 1, which operationalizes childcare as binary and compares sandwiched caregivers to eldercare-only caregivers, Study 2 operationalizes childcare as a continuous variable and studies a sample of sandwiched caregivers. As shown in Figure 2, Study 2 examines whether time in childcare positively moderates the negative relationship between time in eldercare and caregiver wellbeing.

As childcare and eldercare demands do not occur in isolation, it is conceivable that the effects of family demands accumulate and interact with each other. Resource theories support the idea that the demands placed on the employed caregiver from having childcare demands will increase the likelihood that they will be drained of resources (particularly in the family domain) and have more difficulty coping with heavier time commitments to the role of caregiver.

While we were unable to find any empirical evidence of childcare demand X eldercare demand interactions, there are several work domain studies that explore job demand X job demand interactions (e.g., ten Brummelhuis & Bakker, 2012). These work domain researchers argue that these demand X demand interactions may occur because of loss spirals: "high demands regarding one specific aspect of the job may lead to losses of one's finite personal energetic resources... resulting in a weakening of resource reserves for confronting other job demands" (Bakker & Demerouti, 2017). Even though these demand X demand studies have been limited to the work domain, a similar argument may be made for the family domain. Accordingly, high childcare demands may lead to losses of one's finite personal resources and, subsequently, result in fewer resources available to satisfy eldercare demands. The arguments above support the following hypotheses:

H3: Childcare hours positively moderates the positive relationship between eldercare hours and (a) perceived stress, (b) depressed mood, (c) caregiver strain, and (d) family-role overload.

Methodology

This section reports on the samples and survey instrument used in the studies reported on in this paper. While we describe both the eldercare-only and sandwich samples in this section (as both samples are relevant to Study 1), Study 2 uses only the sandwich sample.

Data Source

This manuscript draws data from a much larger study ($n \sim 25,000$) conducted in 2012, which examined the challenges of balancing work, family, and eldercare across Canada. Employees from 71 of Canada's larger (i.e., at least 250 employees) public, private, and not-for-profit organizations were surveyed. Complete details on this study can be found in Duxbury and Higgins (2017).

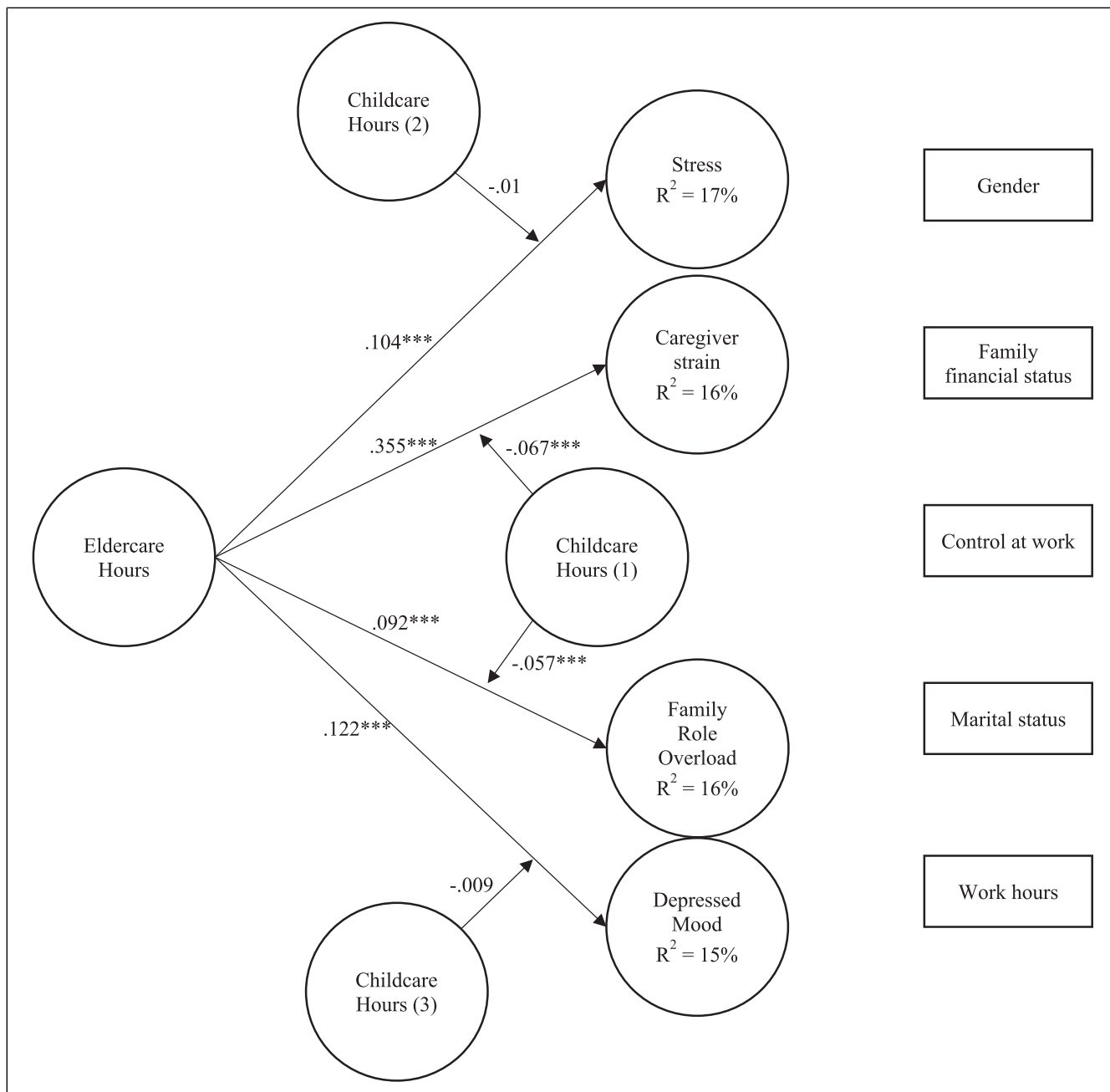


Figure 2. Study 2: Theoretical Model and Results.

Note. $N_s = 2616$. $^{***} p < .001$. While the childcare hours construct is illustrated as three separate constructs in the figure to limit path loadings from crossing one another (i.e., increases readability), the statistical examination of the theorized model only included a single childcare hours construct. Rectangles represent control variables. Gender, control at work, and family financial status are significant at *** with all outcome variables. Marital status and work hours were not significant in this analysis.

Two samples were created from this larger dataset as follows. To reduce the impact of uncontrolled confounds, we limited the sample to those who worked full time (operationalized as > 37 hours per week), and answered all line items associated with study variables. All respondents in our two samples, provided eldercare, defined as “informal,

unpaid caregiving to meet physical, cognitive, and/or emotional needs of older adults.” (Clancy et al., 2020, pg.10). We used childcare hours and eldercare hours to create two smaller samples: (1) the eldercare-only sample ($n = 2508$) which includes employees who reported that they spent time each week in eldercare but spent no time in childcare, and (2) the

Table 1. Constructs, indicators, and loadings included in the measurement model for eldercare and sandwich samples.

Construct/Indicators	Loading	
	Eldercare	Sandwich
Perceived stress		
Been upset because something happened unexpectedly	.73	.71
Felt difficulties were piling up so high that you could not overcome them	.80	.80
Felt that you were unable to control important things in your life	.82	.82
Felt nervous or "stressed"	.79	.78
Felt that things were going your way (R)	.72	.70
Found that you could not cope	.76	.78
Felt that you were on top of things (R)	.74	.74
	α	.88
	CR	.91
	AVE	.58
Caregiver strain		
Eldercare is a physical strain (because of effort or concentration)	.82	.81
Eldercare is a financial strain	.75	.74
Eldercare leaves me feeling completely overwhelmed	.83	.84
	α	.72
	CR	.84
	AVE	.64
Family-role overload		
Do expectations at home leave you with little time to get things done	.79	.79
Is there a great deal to be done at home	.81	.82
Do you run out of time at home to do all the things that need to be done	.83	.85
Do the number of tasks you have at home exceed the amount of time you have to do them	.86	.87
Do you feel emotionally exhausted from all you have to do at home	.87	.85
Do you feel physically exhausted from all you have to do at home	.86	.84
	α	.92
	CR	.93
	AVE	.70
Depressed Mood		
Felt that you just could not get going	.80	.79
Had personal worries that made you feel sick	.84	.84
Felt that nothing turned out right for you	.87	.87
Wondered if anything was worthwhile anymore	.81	.81
	α	.85
	CR	.90
	AVE	.69

Note. Study 1 examines both eldercare and sandwich samples. Study 2 examines only the sandwich sample. α = Cronbach's alpha. CR = composite reliability. AVE = average variance extracted.

sandwich sample ($n = 2616$) which includes employees who reported that they spent time each week in both childcare and eldercare.

We used psychometrically sound measures from the research literature to operationalize all constructs in our framework. Scale items along with Cronbach's alpha can be found in Table 1. All scale scores were calculated so that higher scores on the scale reflect higher levels of the construct being measured.

Four previously validated scales were used in this study. *Perceived stress* was measured using seven items from Cohen et al.'s (1983) perceived stress scale (PSS). Respondents'

answers were collected using a 5-point Likert scale (1 = Never; 3 = Sometimes; 5 = Always). *Caregiver strain* was operationalized using three items from Robinson's (1983) caregiver strain index. Respondents answered on a 5-point Likert scale (1 = Never; 3 = Weekly; 5 = Daily). *Family-role overload* was measured using six items from the scale developed by Bohlen and Viveros-Long (1981). Respondents used a 5-point Likert scale (1 = seldom; 3 = 50% of the time; 5 = almost always) for their responses. *Depressed Mood* was operationalized using four items from Moos, Cronkite, Billings, and Finney's (1988) depressed mood scale. A 5-point Likert scale (1 = Never; 3 = Sometimes; 5 = Always)

was used to collect responses. Respondents also indicated approximately how many hours per week they spent in paid employment, childcare, and eldercare.

The survey instrument also included items that allowed us to control for the following possible confounds in our analysis: gender (male = 1, female = 0), marital status (married/living with partner = 1, else = 0), family financial status (operationalized using a measure developed by Duxbury & Higgins, 2017), and control over work (operationalized using the measure developed by Dwyer & Ganster, 1991). The Cronbach's alpha for the control at work scale was .85 for both eldercare and sandwich samples.

Methodology: Study 1

Following the guidelines articulated by Hair et al. (2012), we tested our hypotheses using Partial Least Squares (PLS) structural equation modeling (SEM) software (SmartPLS 3.2.6). We begin by reporting on the measurement model for each sample. We then describe tests for measurement invariance and evaluation of the structural model for Study 1.

Assessment of Measure Models. Hair et al. (2012) recommend that measurement models can be evaluated by examining the following criteria: indicator reliability, internal consistency, convergent validity, and discriminant validity. Indicator reliability is generally perceived to be adequate when indicator loadings are at least .7 (Hair et al., 2011). Cronbach's alpha and composite reliability (Fornell & Larcker, 1981) are used to judge internal consistency. Internal consistency is considered acceptable when their values are greater than .7. Convergent validity is evaluated by examining the average variance extracted (AVE). AVE measures the level of variance captured by a construct versus the level of variance due to measurement error. Scales with AVE greater than .5 are deemed to have adequate levels of convergent validity (Fornell & Larcker, 1981). Discriminant validity was assessed by, first, comparing the correlations among constructs to the square root of the AVE. Adequate discriminant validity is established when these correlations are smaller than the square root of AVE, as this indicates that the construct shares more variance with its associated measure than it does with other constructs in the model (Hair et al., 2012). Cross-loadings were then examined to ensure that multicollinearity was not an issue. We again follow the rules of thumb outlined by Hair et al. (2011), who note that cross-loadings of 0.4 or greater may be problematic. If multicollinearity is present in our data, we will calculate the Variance Inflation Factor (VIF). As a rule of thumb, VIF should be less than 5 (Hair et al., 2012).

Table 2 shows factor loadings, Cronbach's alpha, Fornell and Larcker's measures of composite reliability, and AVE for each of our wellbeing outcomes by caregiving group. All scales achieved a Cronbach's alpha above .7, Fornell and

Larcker's composite reliability above .82, and passed the test for convergent validity with values greater than .5.

Table 2 shows the means (calculated as the average of all items in the measure), standard deviations, and correlations between constructs in the model for eldercare and sandwich samples. The diagonal element of the correlation matrices has been replaced (bolded and italicized) with the square root of the AVE. The fact that for all constructs the square root of AVE is greater than the corresponding row and column correlations indicates adequate discriminant validity. Examination of the pattern of loadings and cross-loadings between the 11 variables identified five cross-loadings above .4. None of these high cross-loadings involved a hypothesized relationship (i.e., between eldercare hours and a wellbeing outcome) and all had a VIF between 1.0 and 1.5. The measurement model was, therefore, deemed to be acceptable.

Paired-samples T tests determined that respondents in the sandwich group reported, on average, higher levels of perceived stress, family-role overload, and childcare hours and lower levels of eldercare hours and control at work than those in the eldercare sample.

Examination of Measurement Invariance. H2 posits that caregiver type (i.e., sandwich, eldercare) will impact the strength of all the relationships in the model. From a statistical perspective, this hypothesis requires us to test for significant differences between the eldercare and sandwich samples. Henseler et al. (2016) note that such between-group comparisons can be misleading when testing a composite model using SEM. For example, while the analysis may identify group differences in the data, it may be unclear as to whether these differences arise from differences in perceptions of a construct (e.g., respondents in the eldercare sample perceive the caregiving strain construct differently than their counterparts in the sandwich sample) rather than differences in the relationships between constructs.

We follow Henseler et al.'s (2016) recommendations to overcome this issue by using their three-step procedure to analyze the measurement invariance of the composite model (MICOM). We used the permutation algorithm included in SmartPLS to determine whether or not the same construct is being measured across the two different groups. The results from our MICOM analysis (available from the authors on request) revealed full measurement invariance, allowing us to proceed with confidence with our Multi-Group Analysis (MGA).

Multi-Group Analysis of Structural Model. Finally, the MGA routine included in SmartPLS was utilized to test for significant differences in group-specific parameter estimates (i.e., path coefficients) between the eldercare and sandwich samples. PLS-MGA is a non-parametric significance test for the difference of group-specific results that builds on PLS-SEM bootstrapping results (Henseler et al., 2016). Group

Table 2. Means, standard deviations, and correlations for study variables.

Variables	Eldercare Mean (SD)	Sandwich Mean (SD)	1	2	3	4	5	6	7	8	9	10	11
1. Eldercare hours ^b	7.5 (10)	6.2 (7)		.130***	.310***	.114***	.136***	.216***	.038*	.010	-.13***	-.06***	-.003
2. Perceived stress ^b	2.8 (.7)	2.9 (.7)	.105***	.761.76	.348***	.486***	.563***	.037*	.039*	.139***	-.237***	-.281***	.028
3. Caregiver strain ^a	1.9 (.9)	1.8 (.9)	.356***	.391***	.801.80	.342***	.349***	-.018	-.023	.071***	-.234***	-.118***	.016
4. Family-role overload ^{a,b}	2.8 (.9)	3.3 (.9)	.231***	.472***	.394***	.841.84	.417***	.206***	.012	.238***	-.225***	-.175***	.037*
5. Depressed mood	2.4 (.9)	2.5 (.9)	.093***	.573***	.361***	.416***	.831.83	.023	.020	.109***	-.226***	-.262***	.045**
6. Childcare hours ^b	0	18.4 (19)	-	-	-	-	-	-	-.056***	.088***	-.07***	-.010	-.06***
7. Employed hours	39.9 (8)	40.4 (9)	.018	.025	.043*	.030	.02	-	-	-.183***	.020	-.141***	.020
8. Gender	.74 (.4)	.67 (.5)	.045*	.121***	.025	.107***	.112***	-	-.118***		.019	.009	.055*
9. Family financial status	.79 (.8)	.81 (.7)	-.154***	-.274***	-.247***	-.254***	-.253***	-	.024	.002		.114***	-.114***
10. Control at work ^b	2.8 (.8)	2.7 (.8)	-.04*	-.28***	-.11***	-.12***	-.22***	-	-.22***	.003	.119***	.851.85	-.032*
11. Marital status	.67 (.4)	.86 (.4)	-.06**	-.003	-.008	-.03	.014	-	.014	.013	-.028	.010	

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

^aEldercare-only sample (bottom left). Sandwich sample (top right). The diagonal of this matrix has been replaced by the square root of the average variance extracted.

^bSuperscripts represent significant group differences from paired-samples t-tests at $p < .001$. Gender: male = 0, female = 1. Family financial status: comfortable living or better = 1, else = 0. Marital status: married or living with partner = 1, else = 0.

differences are considered significant when the MGA reveals a probability of error less than 5% (i.e., $p < .05$, $p > .95$).

Methodology: Study 2

With one exception we followed the same steps to test H3 as we used to test H1 and H2. The moderation was assessed using SmartPLS' moderator function, which indicates with a p -value whether the moderation is significant (Hair et al., 2012).

Results

Eldercare-Only and Sandwich Generational Samples

Table 3 provides demographic information on the two samples considered in our studies: the eldercare-only ($n = 2508$), and the sandwich ($n = 2616$) samples. Preliminary analysis using paired-sample T-tests identified only two significant between-group differences in the samples. Employees in the eldercare sample were, on average, older (eldercare $M = 49$; sandwich $M = 46$) and had longer job tenure (eldercare $M = 7.8$; sandwich $M = 6.9$) than those in the sandwich sample.

Results: Study 1

Figure 1 summarizes findings for Study 1. Following the recommendations of Hair et al. (2012), we first report the coefficient of determination (i.e., R^2), followed by the path

coefficient estimates (i.e., β). Examination of the R^2 in our model reveal a substantive proportion of the variance in stress (eldercare-only: $R^2 = 17\%$; sandwich: $R^2 = 17\%$), caregiver strain (eldercare-only: $R^2 = 14\%$; sandwich: $R^2 = 14\%$), family-role overload (eldercare-only: $R^2 = 12\%$; sandwich: $R^2 = 14\%$), and depressed mood (eldercare-only: $R^2 = 13\%$; sandwich: $R^2 = 15\%$) is accounted for by the constructs in our model, regardless of caregiver group.

H1 posits eldercare hours is positively related to (a) perceived stress, (b) depressed mood, (c) caregiver strain, and (d) family-role overload, regardless of caregiver type. H1 was fully supported by the data. Eldercare hours is positively related to stress (eldercare-only: $\beta = .048$; $p < .05$; sandwich: $\beta = .091$; $p < .001$), depressed mood (eldercare: $\beta = .048$; $p < .05$; sandwich: $\beta = .109$; $p < .001$), caregiver strain (eldercare: $\beta = .286$; $p < .001$; sandwich: $\beta = .272$; $p < .001$) and family-role overload (eldercare-only: $\beta = .175$; $p < .001$; sandwich: $\beta = .078$; $p < .001$).

H2 posits that the positive relationship between eldercare hours and (a) perceived stress, (b) depressed mood, (c) caregiver strain, and (d) family-role overload is stronger for sandwich employees than eldercare-only employees. H2 was partially supported. The positive association between eldercare hours and stress ($\beta = .05$; $p < .05$), as well as the relationship between eldercare hours and depression ($\beta = .061$; $p < .05$), was stronger for sandwich employees than eldercare-only employees. Contrary to what we expected, we found that the relationship between eldercare hours and family-role overload is stronger for those in the eldercare-only

Table 3. Demographic statistics for samples.

	Eldercare Sample (<i>n</i> = 2508)		Sandwich Sample (<i>n</i> = 2616)	
	Mean	SD	Mean	SD
Age ^a	49.28	9.7	46.49	7.1
Employed hours per week	39.99	8.7	40.40	9.1
Years in current organization	15.74	4.6	14.97	3.8
Years in job ^a	7.80	7.7	6.94	7.1
Gender (% male)	26		32	
Marital status (% married or living with partner)	67		86	
Family financial status (% living comfortable)	79		81	
Education (% with university degree)	50		54	

Note. Study 1 examines both eldercare and sandwich samples. Study 2 examines only the sandwich sample.

^aSuperscripts represent significant group differences from paired-samples t-tests at $p < .001$ for Study 1.

sample than those in the sandwich sample ($\beta = .100$; $p < .001$). Finally, we note that caregiver strain was not related to caregiver type ($\beta = .03$; *n.s.*).

Gender, family financial status, control at work, marital status, and work hours were included in Study 1 as control variables. While marital status and work hours were not significant control variables in this analysis, gender, family financial status, and control at work significantly controlled for the variance of all outcome variables at $p < .001$. Specifically, gender acted as a significant control variable for stress ($\beta = .144$; $p < .001$), caregiver strain ($\beta = .058$; $p < .001$), family-role overload ($\beta = .234$; $p < .001$), and depression ($\beta = .058$; $p < .001$). Family financial status acted as a significant control variable for stress ($\beta = -.205$; $p < .001$), caregiver strain ($\beta = -.175$; $p < .001$), family-role overload ($\beta = -.176$; $p < .001$), and depression ($\beta = -.217$; $p < .001$). Control at work acted as a significant control variable for stress ($\beta = -.271$; $p < .001$), caregiver strain ($\beta = -.091$; $p < .001$), family-role overload ($\beta = -.145$; $p < .001$), and depression ($\beta = -.246$; $p < .001$).

Results: Study 2

The results obtained when we tested the structural model used in Study 2 are shown in Figure 2. Examination of the R^2 in our model reveal a substantive proportion of the variance in stress ($R^2 = 17\%$), caregiver strain ($R^2 = 16\%$), family-role overload ($R^2 = 16\%$), and depressed mood ($R^2 = 15\%$) is accounted for by the constructs in our model.

H3 posits that childcare hours positively moderates the relationship between eldercare hours and (a) perceived stress, (b) depressed mood, (c) caregiver strain, and (d) family-role overload. H3 was not supported by the data. Childcare hours do not moderate the positive relationship between eldercare hours and stress, or between eldercare hours and depressed mood. Interestingly, data analysis reveals childcare hours negatively moderate the relationship between eldercare hours and caregiver strain ($\beta = -.067$; $p < .001$) and between eldercare hours and family-role overload ($\beta = -.057$; $p < .001$). To better

understand these findings, we plot the relationship between eldercare hours and caregiver strain (see Figure 3(a)) and between eldercare hours and family-role overload (see Figure 3(b)) at one standard deviation above and one standard deviation below the mean of childcare hours. In both cases, the analysis imply that childcare hours buffer the relationship between eldercare hours and these two indicators of employee wellbeing.

Gender, family financial status, control at work, marital status, and work hours were included as control variables in Study 2. The significance of these control variables was essentially identical to that reported in association with Study 1.

Discussion

This paper presents findings from two studies designed to provide insights into the relationship between childcare, eldercare, and four employee wellbeing outcomes. The samples used were large (eldercare-only: $n = 2508$; sandwich: $n = 2616$) and included men and women in their mid (sandwich) to late (eldercare) 40s. Hours per week spent in childcare and eldercare were used to quantify the intensity of demands of two key family roles, parent and eldercare provider, an approach that is consistent with that advocated by Statistics Canada (Sinha, 2013).

The fact that women outnumber men in both our sandwich and caregiver samples (26% of those providing eldercare and 32% in the sandwich group are male) reinforces the idea that dependent care is still gendered in many Canadian families. This gender difference is also consistent with national data (Sinha, 2013), which reports that most informal care providers in Canada are women and evidence from the research literature (Burch et al., 2019; Clancy et al., 2020).

Eldercare-only and sandwich samples were demographically very similar (no differences in time spent in paid employment, family financial status, education, marital status) and any differences between the two groups are consistent with how the sample was selected. This is

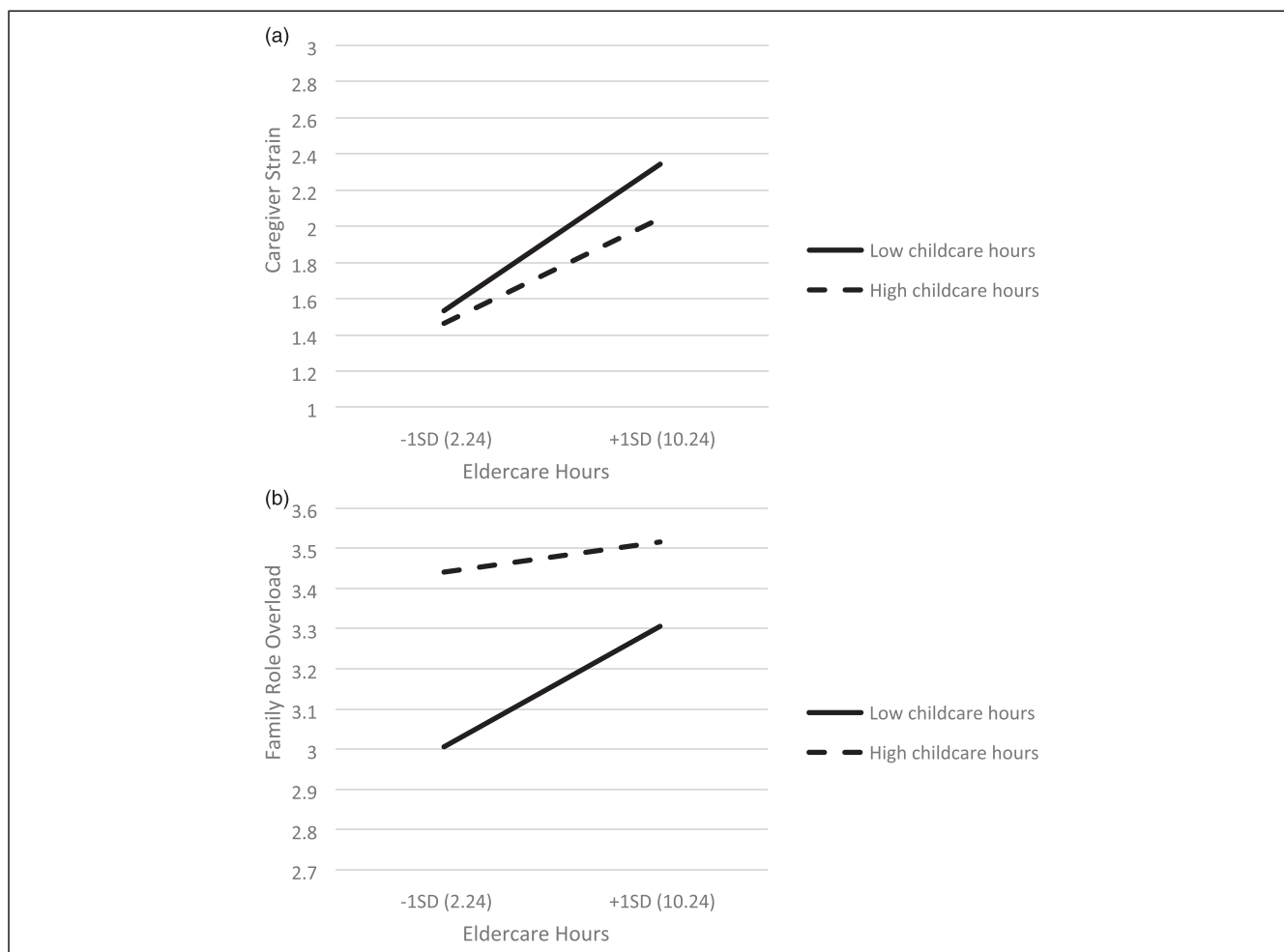


Figure 3. (a) Moderation of the relationship between eldercare hours and caregiver strain by childcare hours. (b) Moderation of the relationship between eldercare hours and family role overload by childcare hours.

important, as it implies that any differences in employee wellbeing associated with caregiver type are likely due to disparities in eldercare demands and responsibilities and/or the need to balance work and responsibility for two different dependent care roles.

Our analysis showed that caregiver type was not associated with caregiver strain or depressed mood, suggesting that these outcomes are associated with eldercare, regardless of the presence of children in the home. Our analysis also found that hours per week in paid employment was not associated with caregiver type. This finding is interesting, given that previous research has found that employees vary their working demands to accommodate childcare demands (Byron, 2005). We interpret this finding to mean that our samples gave priority to meeting the demands of their job, and that any resource transfer occurred between the two family roles examined in this study and/or the employee’s personal time.

Despite the above similarities, we did identify a number of important differences between our two samples associated

with caregiver type. Compared to those in the sandwich group, those in the eldercare-only sample spend significant more hours per week in eldercare—a finding that might be due to fact that employees in the eldercare only group do not have to juggle time in eldercare and time in childcare (those in the sandwich group spend 18.4 hours a week in childcare) and/or or reflect the fact that those in the eldercare only group in this group are looking after someone who is older/frailer and requires more social/emotional support from their caregivers. Those in the sandwich sample, on the other hand, have higher family demands over all (24.6 vs. 7.5 hours per week in some form of caregiving) and report significantly higher levels of perceived stress and family-role overload and lower levels of control at work.

The models tested in this study explore the relationship between hours per week in eldercare and three sets of outcomes—employee mental health (stress, depressed mood), family-role overload and caregiver strain—for two types of caregivers (eldercare-only, sandwich). Hours in childcare per week (i.e., demands associated with being

a parent) was not included in our testing of model one, which only considered whether or not the employee had childcare or not. Model two, on the other hand, included hours per week in childcare as a possible moderator of the relationships in model one, and was tested using a sample of employees in the sandwich group. Consideration of the findings from analysis of these two models provides us with a number of important insights into how demands at home impact employee wellbeing.

Relationship: Time in Eldercare, Time in Childcare, and Employee Mental Health

Our analysis indicates that the relationship between time in eldercare and employee wellbeing did not depend on how we operationalized the mental health construct (stress, depressed mood), but it did depend on how we operationalized childcare. Study 1 showed that the positive association between eldercare hours and both stress and depressed mood was significantly stronger for employees in the sandwich group than those in the eldercare-only sample. Study 2 determined that childcare hours did not moderate the relationships between hours in eldercare and stress or depressed mood.

These findings support two conclusions. First, eldercare demands are a strong predictor of employee mental health, a finding that is consistent with the research literature (Burch et al., 2019; Burke, 2017; Clancy et al., 2020). Sinha (2013), for example, found that eldercare providers' perceptions that they could not cope with their eldercare demands as well as their feeling worried, anxious, stressed and tired increased concomitant with the number of hours spent in eldercare. Many of the studies reported on in the literature do not, however, distinguish between sandwich and eldercare groups.

Second, it would appear that it is the provision of childcare itself (Study 1), rather than the amount of time a caregiver spends in that parenting role (Study 2), that is a more important predictor of the negative relationship between caregiver stress and depressed mood. These findings support the notion that juggling between roles may deplete energy reserves, which may negatively impact sandwiched employee's mental health (Edwards & Rothbard, 2000) and reduce their resilience and their ability to cope effectively (Alvaro et al., 2010). Also relevant to this discussion is DePasquale et al.'s (2018) work on family time adequacy. Our results may mean that eldercare providers with children at home are more likely than their counterparts in the eldercare only group to perceive low family time adequacy (i.e., feel rushed, stressed, crunched for time). As the authors note "Family time squeezes reflect perceived or actual resource depletion (e.g., objective time), both of which have the potential to be psychologically harmful and result in stress and strain" (DePasquale et al., 2018, p. 549). Further research is needed to explore these relationships in more detail.

Relationship: Time in Eldercare, Time in Childcare, and Family-Role Overload

Both studies provide evidence that childcare buffers the relationship between time in eldercare and family-role overload. Study 1 finds the relationship between eldercare hours and family-role overload stronger for employees with only eldercare demands than those with childcare and eldercare demands, while Study 2 shows that time in childcare negatively moderates the relationship between time in eldercare and family-role overload.

Several interesting observations can be made regarding these data. First, they suggest that childcare hours are a stronger predictor of family-role overload than eldercare hours. The data in Figure 3(b) showing that those with high childcare hours have greater family-role overload than those with low childcare hours, regardless of eldercare hours, supports this assertion.

Second, these studies suggest that both having a parent role (i.e., Study 1) and the extent of resources consumed in the parent role (i.e., Study 2) may buffer the relationship between eldercare hours and family-role overload. While it is difficult to know exactly what is behind these findings, we speculate that role enhancement between the parent and caregiver role may be occurring (Edwards & Rothbard, 2000). More specifically, skills and resources gained from performance of the parent role (time management, priority setting, setting realistic goals) may enhance cognitive and behavioral functioning in their performance of the eldercare provider role (i.e., more efficient with their time, more patient with the person they are caring for). Alternatively, it may be that more time spent in the parent role improves the employee's mood, which helps them cope with emotional strains and stresses associated with eldercare and enhances their ability to keep eldercare issues in perspective (Edwards & Rothbard, 2000). This interpretation of our findings is consistent with Greenhaus and Powell's (2006, p.73) enrichment theory—"the extent to which experiences in one role improve the quality of life in the other role"—and supports the idea that, the more time an employee spends in childcare per week, the more likely they will be to acquire instrumental (e.g., skills, abilities) and affective (e.g., mood, satisfaction) resources that can be applied to their performance of the eldercare role and help them cope effectively with family-role overload. Again, further research is needed to help us better understand under what conditions role enhancement occurs.

Relationship: Time in Eldercare, Time in Childcare, and Caregiver Strain

Study 1 revealed that, when childcare demands were operationalized as a dichotomous variable, there was no difference in the positive association between hours in eldercare and caregiver strain linked to caregiver type. Analysis done in conjunction with Study 2, which found that childcare hours

negatively moderated the relationship between eldercare and caregiver strain, helps us “unpack” these findings.

Interestingly, these results indicate that being a parent does not, on its own, predict enrichment from the parent role to eldercare role (i.e., Study 1). Rather, what does appear to be important is the amount of resources consumed in the parent role enriches the eldercare role with respect to a reduction in caregiver strain (e.g., financial, physical, and emotional burdens of eldercare), as can be observed in Study 2. Supported by [Figure 3\(a\)](#), it appears that efficiencies are gained when there are high childcare and eldercare demands. This finding implies that the integration of parent and caregiver roles may allow individuals to better manage their eldercare demands and prevent them from experiencing caregiver strain. Role integration theorists (e.g., [Ashforth et al., 2000](#); [Clark, 2000](#)) would suggest that the flexibility (i.e., the malleability of the boundary) and permeability (i.e., the extent to which the boundary allows psychological or behavioral aspects of one role to enter another) of the parent-caregiver boundary may facilitate better management of eldercare demands.

Conclusions

This multi-study research initiative supports the following conclusions. First, perceived stress, depressed mood, caregiver strain, and family-role overload are all significantly and positively associated with time spent in eldercare per week (i.e., employee wellbeing declines as hours in eldercare per week increase) for those working full-time, regardless of caregiver type. Second, the positive relationship between hours in eldercare per week and perceived stress and depressed mood is significantly stronger for sandwich employees than eldercare-only employees regardless of the amount of time spent per week in childcare. Third, while the relationship between hours in eldercare per week and caregiver strain is not impacted by childcare when childcare is operationalized as a dichotomous variable (yes/no spend time in childcare per week), the results are very different when childcare hours are operationalized as a continuous variable. We note, moreover, that time in childcare per week buffers the negative relationship between eldercare hours and caregiver strain, providing evidence of positive spillover from the role of parent to the role of eldercare provider at least with respect to the experience of caregiver strain (financial, physical and emotional burdens of eldercare). Fourth, the buffering effect of childcare on the relationship between time in eldercare and family-role overload is complicated. While the positive association between eldercare hours and family-role overload is stronger for eldercare-only employees than sandwich employees, those with high childcare tend to have more family-role overload than those with low childcare.

A number of factors increase our confidence in the generalizability of our findings. Specifically, the demographic similarities between our sample of caregivers and the

caregivers who responded to Statistics Canada’s 2007 and 2012 General Social Surveys (GSS) ([Keefe, 2011](#); [Sinha, 2013](#)), our ability to control for a number of possible confounds when undertaking our analysis (e.g., gender, family financial status, control over work, marital status, work hours), our use of psychometrically sound measures for outcomes and controls, our ability to model time in childcare and eldercare as continuous variables, and our use of a theoretically derived framework to guide the analysis all contribute to the generalizability of our findings.

There are several limitations to this research that need to be acknowledged. First, data are cross-sectional in nature which means causality cannot be established. Longitudinal research is needed to untangle the complicated relations exposed in studies. Second, data were self-reported and, thus, could involve reporter bias. Future research may benefit from the inclusion of non-self-reported data or the use of multi-method (i.e., qualitative and quantitative) approaches. Third, the data were collected from a sample of employees in Canada. Future research may benefit from conducting studies in other countries to help us understand how macro-level constructs, such as beliefs and values, influence employee behaviors and outcomes explored in these studies. Finally, we were unable to determine the impact various factors associated with the use of a complex survey design (e.g., sampling weights, adjusting for clusters/strata) had on our findings. This limits the generalizability of the findings outside of the study sample. Future research in the area would benefit if researchers considered issues associated with complex survey design when designing their studies.

This study provides numerous insights and cautions for researchers working in the work-family domain with respect to operationalization of the eldercare-only and sandwich groups by demonstrating that findings can vary depending on how researchers select their sample and what outcomes they include in their model. It also reinforces the idea that these two family roles are different from each other and supports the need for more research into balancing work and eldercare when children are in the home and when they are not. Finally, we note that support could be found for both the role enhancement and role draining theories depending on how we operationalized caregiving roles (sandwich vs. eldercare-only; continuous variable vs. a dichotomous variable) and what wellbeing outcomes we included in our analysis. We conclude that the relationships examined in this paper are very complex and that care should be taken not to generalize from one study to the next if the constructs being studied or the sample used are quite different.

A Call to Action

This study responds to [Moen and DePasquale’s \(2017\)](#) observation of the need for policy-relevant research on caregiving for older adults. The findings from this paper provide a wake-up call for change for employers given the data

showing that the percent of the workforce in the developed world is likely to increase in the next several decades. Interested employers should consider expanding their Employee Assistance Programs to include those employees who are providing eldercare (i.e., eldercare assistance programs), making respite care available for their employees who need this type of support, and training managers on how to support their direct reports in the sandwich and eldercare-only stages of the life cycle. Burch et al. (2019, p. 60) note that research in the area is consistent in reporting that supervisor support of direct reports with caregiving responsibilities is key to the wellbeing of elder caregivers. While the authors state that “training in family supportive supervisor behaviors may be particularly promising as an intervention for employers of informal elder caregivers,” they unfortunately provide no details on how such programs should be designed or delivered. Future research is urgently needed to address this issue. Governments and employers also need to implement formal policies and programs with respect to paid time off work for eldercare, provide tax credits to employees who engage in caregiving, and provide paid caregiver leave to help those engaged in eldercare including those who also have children in the home. An example of how this has been done successfully in the Nordic countries can be found in Seggaard and Saglie (2017). Having a formal policy framework around and concrete support for those with eldercare will also signal to management, staff and communities that eldercare is a legitimate issue that is as worthy of support as childcare.

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