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Understanding the association between time spent caregiving and well-being among employed adults: testing a model of work–life fit and sense of community

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ABSTRACT

This study examines factors associated with work–life fit and sense of geographic community as mediators of the negative association between caregiving demands and well-being among employed informal caregivers. Data were drawn from a larger project assessing well-being among residents of three mid-size cities in Ontario, Canada. A subsample was selected of informal caregivers who worked for pay for at least eight hours/week ($n = 276$). Caregiving demands were measured by time spent caring for an adult who was a relative, friend, or neighbour. Well-being followed a holistic conceptualization advanced by the Canadian Index of Wellbeing. The more time spent caregiving, the lower participants' well-being ratings were. This association was mediated by perceived time adequacy, income adequacy, and sense of community, such that the more time participants spent caregiving, the lower their ratings of these three resources. This explained the initial association of caregiving hours with reduced well-being. Enhanced well-being was more strongly associated with sense of community than any other factor, which supports the importance of the community domain in understanding well-being among employed caregivers and suggests its further testing with other population groups. Policy implications for employers and community organizations are provided.

RÉSUMÉ

Cette étude examine les facteurs associés à l'équilibre travail-vie et au sens de la communauté géographique en tant que médiateurs de l'association négative entre les exigences de la prestation de soins et le mieux-être chez les aidants naturels occupant un emploi. Les données ont été tirées d'un projet plus vaste évaluant le mieux-être chez les résidents de trois villes de taille moyenne de l'Ontario, au Canada. On a sélectionné un sous-échantillon d'aidants naturels qui occupaient un emploi rémunéré à raison d'au moins huit heures par semaine ($n = 276$). Les exigences de la prestation de soins ont été mesurées par temps consacré à prendre soin d'un adulte qui était un parent, un ami ou un voisin. Le mieux-être suivait une conceptualisation holistique avancée par l'Indice canadien du mieux-être. Plus on consacrait de temps à la

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prestation de soins, plus les taux de mieux-être des participants étaient faibles. Cette association était modulée par la suffisance de temps, la suffisance de revenu et le sens de la communauté perçus, de sorte que plus les participants consacraient de temps à la prestation de soins, plus leurs taux relatifs à ces trois ressources étaient faibles. Cela expliquait l'association initiale entre les heures de prestation de soins et le mieux-être réduit. Le mieux-être accru était plus fortement associé au sens de la communauté qu'à tout autre facteur, ce qui confirme l'importance du domaine communautaire dans la compréhension du mieux-être chez les aidants occupant un emploi et donne à penser à des essais futurs avec d'autres groupes de population. L'étude mentionne les incidences que ces constatations peuvent avoir sur les politiques des employeurs et des organismes communautaires

An ageing population, longer life spans, and advances in medical care have contributed to the growing prevalence of caregiving as a normative mid-life experience for adult children and, increasingly, for seniors themselves who may provide care for a spouse/partner, sibling(s), adult children with a disability or chronic health problem, neighbours, and friends. Although many caregivers derive fulfilment from meeting the needs of loved ones (Brouwer, van Exel, van den Berg, van den Bos, & Koopmanschap, 2005; Cohen, Colantonio, & Vernich, 2002), there is ample evidence that caregiving is not without challenges. A substantial literature indicates that caregivers can experience high levels of stress and strain with potential impacts on their well-being (e.g. Adams, 2008; Hansen & Slagsvold, 2014; Miyashita et al., 2009; Olsson Ozanne, Strang, & Persson, 2011). In Canada, 28% of the population aged 15 years and older provided care to a chronically ill, disabled, or ageing family member or friend in 2012, and the largest proportion (44%) was aged 45–64 years – baby boomers in their peak earning years. Moreover, the number of caregivers in this age range increased by 20% between 2007 and 2012 (Sinha, 2013), adding urgency to our need to better understand the experiences of employed caregivers and factors that enhance or detract from their well-being.

Understanding the experiences of employed caregivers requires a consideration of multiple factors such as caregiver and care receiver characteristics, the nature and quality of the caregiver–care receiver relationship, the amount and types of care provided, and contextual factors such as the extent to which care is shared with others, and the benefits to caregivers of social support from friends, family, employers, and care professionals (Lero, Keating, Fast, Cook, & Joseph, 2007; Yates, Tennstedt, & Chang, 1999). Much of the literature addressing employed caregivers' well-being focuses on the work–family interface, but only a handful of studies draw attention to the community domain as an important resource or support for employed caregivers coping with multiple roles and competing demands. This oversight is somewhat surprising given that work and family are embedded in a community context, and that characteristics and processes related to each overlap and influence people's abilities to satisfactorily manage their responsibilities and commitments (Voydanoff, 2013). Although caregiving is often viewed as a family responsibility, the role of community becomes more important when demands on caregivers exceed their resources, and when no family members are

nearby or willing to provide care. Community resources can include information, services, and supports available to caregivers for themselves and to the people for whom they provide care. The influence of community can be felt when defined as either geographic territory (e.g. neighbourhood, town, or city) or relational (e.g. social relationships developed through work, leisure, or other shared interests) (Chipuer & Pretty, 1999).

For this study, we focus on geographic community to explore the relationship between time spent caregiving and feelings of well-being by drawing upon a model of work–life fit (Moen, Kelly, & Huang, 2008) and extending it to include a sense of community for a sample of employed caregivers from three different municipalities in Ontario, Canada. More specifically, we examine the relationship between hours of care and subjective well-being among employed caregivers, and the extent to which this relationship is mediated by factors associated with work–life fit and sense of community.

Background context

Caregivers provide unpaid assistance and support with a variety of tasks ranging from transportation, banking, shopping, and housework to helping with activities of daily living and providing or administering medical treatments (Turcotte, 2013). Most caregivers are also involved in gathering information, managing care activities, and providing emotional support (Sinha, 2013). These diverse tasks are essential for care recipients' quality of life and are increasingly recognized as a critical support for reducing the demands on healthcare and social services systems. Time spent caregiving varies according to the relationship to the care recipient (e.g. care of a chronically ill spouse or adult child is more time-consuming than care of other family members), type of care provided (e.g. daily physical care requires more time than weekly tasks such as grocery shopping), and gender (women typically spend more time than men) (Smith, 2004; Turcotte, 2013). Most caregivers spend less than 10 hours per week providing care, but about 10% of Canadian caregivers spend 30 hours per week or more (Sinha, 2013).

In both Canada and the USA, approximately 60% of informal caregivers work for pay, with most employed full time (National Alliance for Caregiving in collaboration with AARP and MetLife Foundation, 2009; Sinha, 2013). Among the challenges many caregivers experience is that of combining employment and caregiving, particularly for those with high caregiving demands. The dual roles may result in work–family conflict, where caregiving and work roles are seen as potentially incompatible and can result in role strain or stress (Duxbury, Higgins, & Smart, 2011). On the other hand, work–family enhancement or enrichment may occur when experiences, supports, and resources in one domain enhance quality of life in the other (Greenhaus & Powell, 2006). Voydanoff (2005) advocates consideration of the community domain as well, because experiences of conflict and enrichment can be amplified or diminished through demands and resources beyond the boundaries of employment and family life. Therefore, all three domains – work, family, and community – have the potential to influence caregivers' well-being.

Well-being and caregiving time

Measures of subjective well-being can be helpful in identifying policy gaps and measuring policy interventions (Diener, 2006). Well-being is a multidimensional construct that

encompasses factors such as health, an adequate income, satisfaction with various life domains, and the subjective assessment of temporal experiences. We conceptualize well-being according to the holistic definition provided by the Canadian Index of Well-being (CIW) as

the presence of the highest possible quality of life in its full breadth of expression focused on but not necessarily exclusive to: good living standards, robust health, a sustainable environment, vital communities, an educated populace, balanced time use, high levels of democratic participation, and access to and participation in leisure and culture. (“What is wellbeing?”, 2012, para. 1)

Research on family and friend caregivers’ well-being is often focused on temporal, health, financial, and social or community outcomes. Feelings of having adequate time for work, family, community, and self is an important contributor to both well-being and work–life fit (Moen et al., 2008). Well-being among those who provide high levels of care is most adversely affected by poor health and fewer social resources. Further, respite care (time for self) and financial compensation are among the most desired resources (Borg & Hallberg, 2006). Caregiving responsibilities create a unique time signature that differentiates employed caregivers from other employees without these commitments. The 1998 Canadian General Social Survey indicates that caregiving time decreases time allocated to paid work and leisure for both men and women, with a more pronounced effect when the care recipient is not co-resident (Bittman, Fast, Fisher, & Thomson, 2004).

Paid employment, caregiving, and consequences for well-being

Work-related problems more often arise when hours of care are greater, although some factors, such as high levels of job motivation and advanced job skills, may help to alleviate work-related strain (Trukeschitz, Schneider, Mühlmann, & Ponocny, 2013). Role strain can also be reduced when caregivers have access to workplace resources designed to support their needs, enabling employees to better cope with the demands of their dual roles (Barnett, Gareis, Gordon, & Brennan, 2009; Yeandle, Bennett, Bucker, Shipton, & Suokas, 2006; Zacher & Winter, 2011). At present, few workplaces have formal or informal supports to accommodate employees who care for adults (Lero, Spinks, Fast, Hilbrecht, & Tremblay, 2012; Pavalko & Henderson, 2006). Flexible work hours may alleviate some of the strain (Chesley & Moen, 2006; Wang, Shyu, Chen, & Yang, 2011) by allowing employees to optimally schedule the timing of work, caregiving, and other activities, but this option is not always available, used by employees, or encouraged by managers (Barham, Gottlieb, & Kelloway, 1998; Barnett et al., 2009; Bernard & Phillips, 2007; Pavalko & Henderson, 2006).

Greater caregiving demands can compromise both mental and physical health. Many employed caregivers experience higher levels of stress, emotional strain, and time pressure (Duxbury et al., 2011). Elevated levels of anxiety and depression and decreased quality of life have been noted among caregivers of dependent adults diagnosed with chronic, degenerative illnesses such as dementia and Amyotrophic Lateral Sclerosis (Wang et al., 2011). Additionally, while there is considerable evidence of the potential negative effects on caregivers’ physical health, primarily as a result of chronic stress (Vitaliano, Zhang, & Scanlan, 2003), very few researchers have examined quality of life in

caregivers who are themselves living with a disability or a chronic health condition (Furrie, 2010). Gahagan, Loppie, MacLennan, Rehman, and Side (2004) suggest that fatigue and the lack of supports may have a heightened negative impact on the health and well-being of caregivers who have a disability. Moreover, there is some evidence that caregivers with disabilities report lower levels of life satisfaction, mental and physical health, and greater loneliness, and that they are more than twice as likely as caregivers without disabilities to experience negative health effects as a result of providing care (Furrie, 2010; Lero & Furrie, 2015).

Many employed caregivers are also parents with children at home. Sometimes referred to as the 'sandwich generation', this group is most likely to report higher levels of role overload than other lifecycle groups, resulting in reduced productivity at work and greater absenteeism (Duxbury & Higgins, 2012). Slightly more women than men provide care to an adult, and they spend more time caregiving than men (Sinha, 2013). Employed women who provide adult or eldercare more often report a decline in well-being compared to their male counterparts. This may be related not only to a greater caregiving time commitment, but also to the likelihood of undertaking more caregiving tasks, providing more personal care, and having care recipients with more behavioural problems than men (Pinquart & Sörensen, 2006). Employed men who are caregivers, on the other hand, are more likely to show enhanced well-being (Chesley & Moen, 2006), consistent with role enrichment experiences.

Employment-related economic consequences that may result from difficulties combining work and caregiving can also affect well-being. Some of these include job loss (quitting or leaving a job), taking early retirement, days absent from work (often unpaid), reduced work hours, and having to turn down a job promotion because it is incompatible with caregiving needs (Bolin, Lindgren, & Lundborg, 2008; Keating, Fast, Lero, Lucas, & Eales, 2014). Such actions have both immediate economic costs in the form of lost wages (Earle & Heymann, 2012) and sometimes lost benefits, and longer term impacts on savings and pension benefits. Absences at work, reduced hours, and performance difficulties can also affect job security, an integral component of work-life fit as conceptualized by Moen et al. (2008).

Caregiving, well-being, and the community context

The role of community has received relatively little consideration in the context of employed caregivers' well-being despite evidence that strong social ties and feelings of community support can affect well-being (see, e.g. Helliwell & Putnam, 2004), and that community networks can play a role in reducing fatigue and resentment, improving the ability to find resources, and obtaining adequate support from others (Greene, Aranda, Tieman, Fazekas, & Currow, 2012). Voydanoff (2005) addresses this oversight in the work-family literature by advocating an ecological systems theory approach that focuses on the work-family-community mesosystem. Resources and supports associated with work, family, and community domains can influence both work-family facilitation and work-family conflict within domain boundaries (e.g. through community services, friend and neighbour support, or sense of community), and through boundary spanning resources such as eldercare programmes and adequate transportation systems. Community supports and resources can help people to reduce work-family conflict and enhance

family and individual well-being, but their absence may lead to a diminished quality of life (Voydanoff, 2005). Pocock, Williams, and Skinner (2012) build on Voyandoff's approach by situating work, family, and community within the broader macrosystem of cultural beliefs and social, economic, and political systems. This allows discussions to move away from notions of balance towards areas of overlap and permeability between the three domains. The authors also suggest that issues of time, space, life stage, and power must be considered when exploring what makes a work–family–community ecosystem function effectively so that it enhances well-being.

Within the community domain, feelings of support, belonging, and identity as well as having resources available to meet one's needs are part of an overall *sense of community* (Prezza, Pacilli, Barbaranelli, & Zampatti, 2009). Social support and needs fulfilment may be particularly relevant to informal caregivers who, at times, may feel overwhelmed by responsibilities in the face of new or changing circumstances related to providing care, working for pay, and other commitments in their lives. Knowing that services are available and accessible, that there are supportive individuals and organizations that they can call upon, and that there are opportunities to meet additional needs are especially important for caregivers who have high caregiving demands. This is evidenced by a variety of studies indicating that many caregivers need occasional respite from caregiving, and often lack informational and emotional supports (see, e.g. Borg & Hallberg, 2006; Lero et al., 2007). Sense of community has been linked to feelings of well-being among specific population subgroups such as young adults (see, e.g. Rollero & De Piccoli, 2010), and among broader sectors of the population (Prezza, Amici, Roberti, & Tedeschi, 2001). To date, however, there is little research that examines how sense of community affects employed caregivers' well-being.

This study explores the relationship between caregiving demands (the number of weekly hours of caregiving) and feelings of well-being among employees who provide care to a dependent or ageing adult. We are guided by a model of work–life fit (Moen et al., 2008), which represents an individual assessment of quality of life at home and at work that is continually evaluated and re-evaluated as roles and responsibilities shift and change over the life course. Caregiving is, for many, a normative mid-life experience (Duxbury & Higgins, 2012) that may require substantial reconfiguring of other activities in order to meet changing role expectations. A strength of the Moen et al. approach is that fit is seen as a dynamic process that emphasizes recurring appraisals of demands and resources as new roles gain prominence and others diminish in importance. It also emphasizes subjective assessments of work conditions because toxic conditions contributing to higher stress levels and feelings of overload are generally based on an outdated career mystique tied to the traditional breadwinner/homemaker model (Moen & Roehling, 2005). Moreover, the authors clearly identify a relationship to health and well-being, compared to other models of work–life fit where the assumption of well-being is less explicit (see, e.g. Brennan, Rosenzweig, Ogilvie, Wuest, & Shindo, 2007; DeBord, Canu, & Kerpelman, 2000; Teng & Pittman, 1996).

Perceptions of work–life fit develop in response to having sufficient resources available to meet external demands in important life domains and their related role expectations. Moen et al. (2008) identify four key resources. These include perceptions of having adequate time for oneself, family, work, and community activities; a sufficient income to provide adequate financial support; a work schedule that allows responsibilities and activities in other life domains to be fulfilled; and feelings of job security, because chronic

economic insecurity and worries about job loss can overshadow positive feelings about work and other activities (Moen et al., 2008). When there is a misfit between the resources and external demands, people will seek to gain control by narrowing the gap between them. If they are unable to do so, well-being may be compromised (Moen et al., 2008). Fit is linked to positive health outcomes, while misfit is associated with more stress, illness, and an increase in coping behaviour (Voydanoff, 2009). Consistent with Voydanoff's (2005) view of the community domain as a resource and support for work–family facilitation, we propose extending the work–life fit model to include sense of community (Prezza et al., 2009) as an additional resource that can mediate the relationship between caregiving and well-being.

Method

For this study we drew on secondary data from survey research conducted by the CIW during 2012–2013 in three mid-size cities in southern Ontario (Smale & Hilbrecht, 2013). The survey was designed to gather information from community residents across eight domains that comprise the CIW conceptual framework: community vitality, democratic engagement, the environment, education, health, leisure and culture, living standards, and time use (Michalos et al., 2011). The purpose of the survey was to assist municipal governments and community organizations in identifying local issues affecting well-being, with the goal of advancing new policies, improved supports, and more effective services for community residents. Because perceptions of well-being can vary according to social location (Diener, 2006), several demographic questions were included in the survey. Communities in which the survey was conducted were similar in population size, shared a similar governance structure (municipal, regional), and were subject to the same provincial and federal policies and services related to the provision of care for dependent and older adults.

Invitations to participate in the survey were mailed to random samples of 10,512, 11,000, and 20,000 households from each of the three communities. In total, 4159 respondents aged 18–97 years completed either an online or print questionnaire (from 1243 to 1515 from each community). Approximately 90% of respondents chose to complete the survey online following the URL provided. The remaining participants requested a mail-out package and completed a printed copy of the survey, which was returned in a prepaid business envelope. We selected a subsample of people who regularly provided care for an elderly, chronically ill, or disabled adult who was a family member, neighbour, or friend ($n = 542$). Of this group, 54.2% ($n = 276$) worked for pay for at least 8 hours each week. Participants who self-selected as caregivers were asked to indicate the number of hours they spent providing care in a typical week. The survey did not collect information about the nature or quality of the caregiver–care receiver relationship, type of disability or illness, or length of time in the caregiver role. The focus of the research was to understand the relationship between caregiver hours and feelings of well-being within this demographic group.

Measures

Demographics

Age was reported in years. Participants were asked to identify their sex as male, female, or transgender. For the purpose of analyses, gender was coded as '0' for female and '1' for

male. None of the employed caregivers identified as transgender. *Partnered* was designated by '0' for people who were single, separated, divorced, or widowed, and '1' for those who were married or living in a common law relationship. To identify whether participants had dual caregiving responsibilities, people with *children under 20 years of age* at home were coded as '1', while caregivers without children in this age range were coded as '0'. Caregivers who were themselves *living with a disability* were coded as '1', whereas those who did not report having a disability were coded as '0'. *Work hours* were reported as the average number of hours each week that caregivers worked for pay at all jobs.

Caregiving time

Participants were asked whether they provided unpaid care to an older or dependent adult (yes/no) and, if yes, how many hours of care they provided in a typical week. *Caregiving hours* consisted of total hours of unpaid care provided in a typical week to dependent or older adults who were family members, friends, or neighbours. Previous research suggests that the number of caregiver hours is a skewed distribution with many caregivers providing only a few hours per week and some providing many more (Sinha, 2013). In the current sample, caregivers reported a median of 5 hours of care per week with a range of 1–168 hours. Since the results were skewed towards fewer hours of care (67.9% of participants provided less than 10 hours of care each week), hours of care were log transformed to provide a more normalized distribution allowing necessary assumptions for analysis to be met (Manning & Mullahy, 2001).

Well-being

Although often conflated with physical and mental health, well-being is a broader concept that includes multiple factors associated with overall quality of life. While it is important to recognize the contribution of objective factors such as age, income, and health status, subjective perceptions of factors contributing to quality of life are also salient (Diener, 2006). Consistent with this understanding, we used a global well-being measure (Howell, 2011) that follows a multidimensional approach to measuring satisfaction across several life domains, including those identified by the CIW as vital to Canadians' well-being (Michalos et al., 2011). *Well-being* was measured using 13 items drawn from the Happiness Initiative Survey (Howell, deGraaf, Musikanski, & Godzikoskaya, 2011). Participants were asked to indicate their level of satisfaction along a 7-point scale from 1 'extremely dissatisfied' to 7 'extremely satisfied' with their physical and mental health; personal relationships; sense of belonging; leisure; work; financial situation; educational opportunities in the community; local government; access to arts, culture, and recreational opportunities in the community; their neighbourhood as a place to live; and the quality of the environment in their neighbourhood. A mean score for all items represented participants' level of overall well-being ($\alpha = .89$).

Work–life fit

Four measures were used for work–life fit. *Time adequacy* was measured by a 12-item scale used by Moen et al. (2008), adapted from Van Horn, Bellis, and Snyder (2001), where answers about having enough time for things such as self-care, relationships, and community could range from 1 'Not at all enough' to 10 'Almost always enough'. A mean score was derived from responses to at least 10 of the 12 items in the scale because two

items – ‘enough time to be with your spouse/partner’, and ‘enough time for you to be with the children you live with’ – were not applicable to all participants ($\alpha = .94$). *Job security* was represented by a mean score of two questions adopted by Moen et al. from Siegrist et al. (2004), namely ‘I have experienced or I expect to experience an undesirable change in my work situation’ and ‘My job security is poor’. Both questions used a 7-point scale where 1 = ‘Very strongly disagree’ and 7 = ‘Very strongly agree’ ($r = .56, p < .001$). *Work–life interference* was used as a proxy for *schedule fit* because the survey did not include questions related to work schedule ($\alpha = .90$). Work–life interference is measured by the mean of 10 items comprising two dimensions of Hayman’s (2005) work–life balance scale: (1) work interference with personal life (six items, e.g. ‘My job makes a personal life difficult’), and (2) personal life interference with work (four items, e.g. ‘My work suffers because of my personal life’). Participants indicated their level of agreement to each item along a 7-point scale where 1 = ‘Very strongly disagree’ and 7 = ‘Very strongly agree’ ($r = .35, p < .001$). Finally, *income adequacy* consisted of the mean of responses to three situations that focused on behavioural assessments of how well participants’ income met their financial needs during the past year. Participants were asked to indicate the frequency with which the following situations occurred: ‘I could not pay my bills on time’, ‘I ate less because there was not enough food or money for food’, and ‘I did not have enough money to buy the things I needed’. The first two situations were drawn from the Happiness Initiative Survey (Howell et al., 2011) and the third was added by the CIW. Responses ranged from 1 ‘Never’ to 5 ‘At least once a month’ and were reverse-scored so that a higher mean score was an indicator of stronger income adequacy ($\alpha = .78$).

Sense of community

Sense of community was measured using a shortened version of the Multidimensional Sense of Community Scale for Local Communities (MTSOCS; Prezza et al., 2009). The original scale has 19 items comprising five subscales. Given the focus of this study, we selected three of the most salient subscales using 11 of the original items. These included: (1) *help in case of need* (3 items), which focuses on perceptions of willingness of people in the community to provide help if needed (e.g. ‘Many people in this community are available to give help if somebody needs it’); (2) *social climate and bonds* (4 items), which addresses social ties and ability to connect with people in the community (e.g. ‘People are sociable here’); and (3) *needs fulfilment* (4 items), which examines perceptions of the availability of services and activities designed to meet residents’ needs and interests (e.g. ‘This community provides opportunities for me to do a lot of different things’). Participants indicated their level of agreement to each item along a 7-point scale where 1 = ‘Very strongly disagree’ and 7 = ‘Very strongly agree’. Five of the items were reverse-scored so that a higher mean score on all 11 items indicated a stronger sense of community. The overall reliability of the shortened version of the scale was high ($\alpha = .90$).

Analysis plan

The sample was characterized using summary descriptive statistics. Next, linear regression analysis was conducted to examine the association between time spent caregiving and well-being, controlling for demographic factors (e.g. gender, age, income, disability, presence of a child under 20 years old at home, and number of work hours). Time adequacy,

income adequacy, work–life interference, job security, and sense of community were added to the regression model as potential explanatory factors in any association found between caregiving hours and well-being.

The multiple potential mediators were then tested with a method that uses bootstrapping to generate a reference distribution to create a 95% confidence interval for significance testing of each estimate (Hayes, Preacher, & Myers, 2011; Preacher & Hayes, 2008). More specifically, this method yields estimates for the *total* effect, or *c* path (association of caregiving hours with well-being), *direct* effect, or *c'* (association of caregiving with well-being controlling for the mediators), and *indirect* effects of caregiving hours with well-being through each mediator (*ab* paths or indirect effects). This method also allows an examination of the extent to which the mediators independently contribute to an explanation of the association of the focal variable (caregiving hours) with the outcome variable (well-being) as well as a comparison between mediators. Upper and lower levels of the bias corrected confidence intervals (ULCI and LLCI, respectively) are given for the mediation point estimates (*ab* paths). Results are deemed statistically significant when the confidence interval for the estimate does not cross zero (i.e. the 95% confidence interval does not include zero).

Results

As shown in Table 1, the mean age of employed caregivers was 53.5 years ($SD = 8.96$), more than half were female (60.2%), and 14.0% reported living with a disability themselves. Most had a household income at or above the median of \$80,000 CAD per year. During a typical week, on average, participants worked for pay for approximately 40 hours and spent slightly more than 12 hours in caregiving activities. There were no significant differences between the three communities in gender distribution, average household income, number of caregivers who lived with a disability themselves, or average weekly caregiving and work hours. The only apparent difference was that one community had fewer caregivers with children at home ($\chi^2 = 7.88, df = 2, p = .019$).

Table 1. Sample characteristics for employed caregivers working more than eight hours/week ($N = 276$).

Factor	Mean/Pct.	SD
Demographics		
Male	39.8	–
Partnered	73.0	–
Household income \geq \$80,000	59.1	–
Age	53.5	8.96
Child(ren) < 20 years old at home	36.5	–
Lives with a disability	14.0	–
Time use		
Weekly work hours	39.7	12.40
Weekly caregiving hours	12.2	23.30
Quality of life		
Time adequacy (1–12)	6.55	2.12
Job security (1–7)	4.39	1.44
Income adequacy (1–5)	4.44	0.83
Work–life interference (1–7)	3.43	0.99
Sense of community (1–7)	4.98	0.87
Overall well-being (1–7)	4.76	0.98

At the first stage of the linear regression model examining factors associated with caregivers' well-being, which included demographic factors and employment hours, a higher income level was associated with better well-being, whereas living with a disability and longer work hours were related to lower levels of caregiver well-being (Table 2, Stage 1). These factors remained significant when caregiver hours were introduced and longer hours of caregiving were also associated with decreased well-being (Table 2, Stage 2). When work-life fit factors and sense of community were added in the final stage, among the demographic characteristics, only living with a disability remained significant. There were significant relationships between caregiver well-being and time adequacy, income adequacy, and work-life interference (Table 2, Stage 3), but job security was not significantly related to well-being. Sense of community had the strongest association to well-being of any of the mediators (Table 2, Stage 3). In total, the model explained 69% of the variance in employed caregivers' well-being.

Subsequent mediation testing (Preacher & Hayes, 2008) revealed that the direct effect (*c*) of caregiver hours on well-being was significant ($B = -0.162, p = .006$) (Figure 1). The model was fully mediated such that the indirect effect (*c'*) was no longer statistically significant when the potential mediators were included in the model ($B = -0.049, p = .185$). Three of the indirect paths were statistically significant (i.e. lower and upper levels of the confidence interval for the indirect effect, or *ab* path, did not cross zero). These were time adequacy (a_1b_1 path: *point estimate* = $-.04$, *SE* = $.18$; *LLCI* = $-.087$, *ULCI* = $-.012$), income adequacy (a_3b_3 path: *point estimate* = $-.02$, *SE* = $.01$; *LLCI* = $-.048$, *ULCI* = $-.004$), and sense of community (a_5b_5 path: *point estimate* = $-.05$, *SE* = $.03$; *LLCI* = $-.111$, *ULCI* = $-.001$). No significant differences were found between any of these three pathways in contrast tests. This suggests that having adequate financial and temporal resources for important activities in one's life is a key contributor to employed caregivers' well-being,

Table 2. Contribution of selected demographics, weekly caregiving hours, and factors related to work-life fit including sense of community to overall well-being.

Independent variables	Stage 1		Stage 2		Stage 3	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Constant	4.54***	.48	4.87***	.49	1.57***	.51
Demographics						
Gender (male = 1)	0.05	.13	0.01	.13	-0.04	.08
Age	0.01	.01	0.01	.01	-0.01	.01
Income	0.48***	.12	0.41***	.13	0.14	.08
Child(ren) < 20 years old at home	-0.10	.13	-0.07	.13	0.06	.08
Living with a disability	-0.60***	.18	-0.53**	.17	-0.27*	.11
Time use						
Weekly work hours	-0.01**	.01	-0.01**	.01	0.00	.00
Weekly caregiving hours	-		-0.16**	.06	-0.05	.04
Work-life fit factors						
Time adequacy	-		-		0.13***	.02
Job security	-		-		0.04	.03
Income adequacy	-		-		0.17***	.05
Work-life interference	-		-		-0.23***	.05
Sense of community	-		-		0.44***	.05
Adjusted <i>R</i> ²	.12		.15		0.69	

Note: $n = 236$ (employed caregivers).

* $p < .05$.

** $p < .01$.

*** $p < .001$.

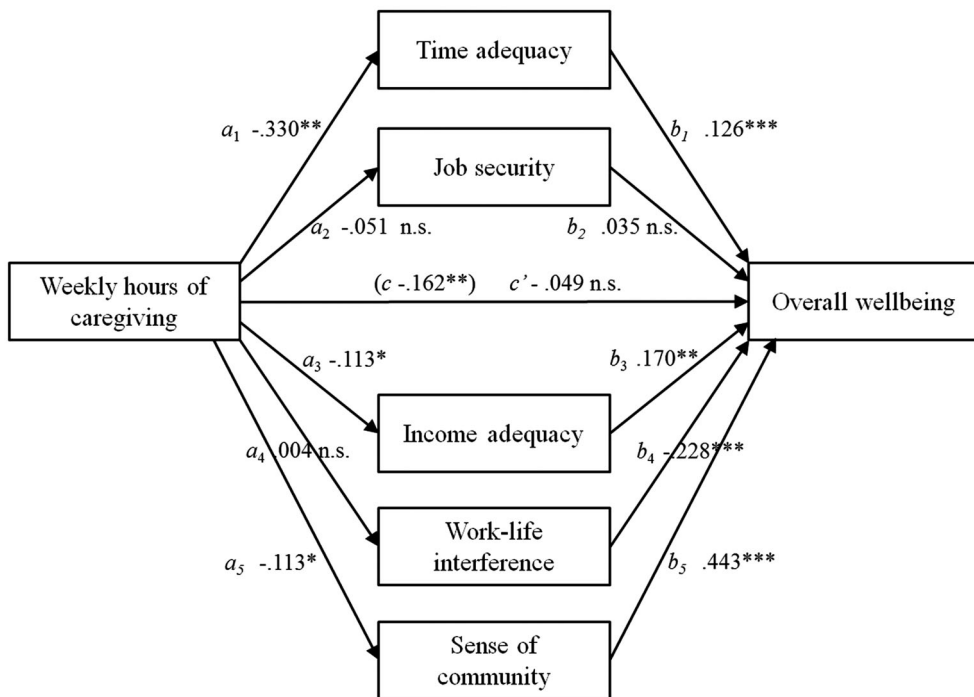


Figure 1. Association between caregiving hours and well-being mediated by time adequacy, job security, financial adequacy, work–life interference, and sense of community. Control variables include: gender, age, income, disability, child(ren) under 20 years old at home, and weekly work hours. $n = 236$ (employed caregivers). $*p < .05$, $**p < .01$, $***p < .001$.

and without these resources, overall well-being suffers. In addition, a strong sense of community in terms of social climate, being able to meet one's needs, and the availability of help if needed all positively contributed to the relationship between caregiving and well-being. It should be noted that the three sub-dimensions of sense of community were all tested separately to better understand the relationship of each dimension to well-being (results not shown). Each dimension had a similarly positive effect on well-being, but on their own did not mediate the effect of caregiver hours on well-being; rather, all three dimensions work together to contribute to the relationship between caregiver hours and well-being.

Discussion

Using community survey data, we examined the relationship between the time spent by employed informal caregivers providing care and their perceptions of well-being. As anticipated, more hours of caregiving was associated with decreased well-being. Following a framework of work–life fit to guide the analysis, we extended the model to include sense of community as a potentially important factor that could help narrow the gap between external demands and individual resources. The results indicate that sense of community has the potential to influence feelings of well-being, as has been advanced in other work–family research (Pocock et al., 2012; Voydanoff, 2013). When stronger

feelings of having adequate time, adequate financial resources, and a strong sense of community were present, well-being was less adversely affected by the challenges often associated with caregiving. Work–life interference did not directly influence the relationship between caregiver hours and well-being; however, experiences and perceptions of work–life interference were adversely related to well-being, which supports previous findings in studies of employed caregivers (see Duxbury & Higgins, 2012; Gordon & Rouse, 2013). In contrast to other research (e.g. Keating et al., 2014), job security was not significantly associated with employed caregivers' well-being in this sample.

Hours of care and well-being

To date, little research has examined the relationship between hours of caregiving and well-being when well-being is conceptualized in a more holistic way. Generally, the focus has been on the association of caregiving demands with caregiver strain and specific mental health outcomes such as depression, emotional strain, and anxiety (Herrera et al., 2013; Olsson Ozanne et al., 2011; Wang et al., 2011). We found that a greater time commitment to caregiving was directly related to lower levels of overall well-being for employed caregivers. Providing more hours of care was associated with lower perceptions of having adequate time for family, friends, leisure, and other important areas of life. With sufficient temporal resources, however, the negative effect on well-being was diminished.

Although total weekly work hours were taken into account, it could be that other temporal conditions of work, such as flexible work hours, might enhance well-being for those with longer hours of care (see, e.g. Bernard & Phillips, 2007; Chesley & Moen, 2006; Pavalko & Henderson, 2006). Unfortunately, the survey did not include information about whether this work option was available or supported by managers. Although we had anticipated that employed caregivers who were part of the 'sandwich generation' would have a lower quality of life and stronger feelings of time pressure, as reported by Duxbury and Higgins (2012), having children at home did not significantly influence employed caregivers' well-being, even with longer hours of caregiving.

Longer hours of care had a negative relationship to feelings of income adequacy, which may be due to a higher financial burden generally or, perhaps, a lower income that does not allow for the purchase of services and supplies that could alleviate some of the strain experienced by caregivers (Keating et al., 2014). Factors that can affect feelings of income adequacy include the number of people supported by that income, other financial commitments such as housing and debt load, and the financial toll caregiving may take on caregivers and their families (Williams et al., 2011). The findings strongly suggest that when sufficient financial resources are available, the negative effect of lengthy caregiver hours on well-being is diminished.

Sense of community could also be negatively affected by longer care hours. When a strong sense of community was present, though, it was related to enhanced feelings of well-being. This indicates the importance of looking beyond work and family factors to the role that a supportive local community can play in the care relationship (Voydanoff, 2009). The relationship between social support and decreased caregiver burden has been identified in other studies (see, e.g. Greene et al., 2012; Lero et al., 2007), but to date there has been little research using community level data that examines the role of sense of community in caregivers' lives. Moving beyond social support to include

other components such as needs fulfilment and access to helpful services provides a more complete picture of how social, organizational, and institutional support in employed caregivers' communities may contribute to better overall well-being. It also underscores the importance of providing services and resources at the local level, and fostering a climate of care and support from other community members.

The results did not show a significant relationship between well-being and factors identified with work-life fit beyond time and income adequacy. The findings suggest that Moen et al.'s (2008) model of work-life fit could be further tested with broader sectors of working adults in order to extend the model to include sense of community. They also indicate that sense of community may be a resource that individuals and local communities should seek to advance by providing opportunities to connect employed caregivers with programmes, services, and other people with similar caregiving situations.

Objective versus subjective well-being

Time and income adequacy represent subjective assessments of living conditions. In contrast, relatively objective measures such as weekly work hours and household income did not contribute significantly to well-being when compared to the subjective perceptions. The impact of subjective appraisals on well-being has been observed in other well-being research (Diener, 2006) and provides a strong rationale for looking beyond objectively assessed conditions to better understand caregiver well-being. Subjective factors also play an important role in models of stress and coping. Lazarus and Folkman's (1984) transactional model of stress and coping focuses on individual perceptions rather than on objective external factors. Cognitive appraisal of an event or circumstance allows an individual to determine whether it is positive, stressful, or irrelevant. Stress occurs when there is a mismatch between the person's feelings of control and perceived ability to cope with external demands, leading to diminished well-being. Providing significant amounts of care on a regular basis (which typically includes commitment and responsibility for caregiving) is one such situation that can often be appraised as stressful (Lero et al., 2007; Yates et al., 1999). The appraisal may lead to reduced levels of well-being when coping resources such as social support, financial resources, and employer support are perceived as inadequate by the caregiver. Conversely, the presence and appraisal of these resources as adequate or even positive allows for greater feelings of control and the ability to manage the situation without diminishing well-being.

The only objectively determined factor seen to influence well-being for caregivers was living with a disability. This has been noted in previous research, where having a disability was a risk factor for detrimental outcomes for caregiver well-being (Furrie, 2010; Gahagan et al., 2004), perhaps reflecting the challenges of meeting one's own needs, including maintaining one's own health and social contacts, while also providing significant amounts of care to a family member or close friend.

Policy implications

Services and programmes provided by municipalities and other organizations that allow employed caregivers to connect with others in similar situations and access information

and support for themselves and those they care for could be promoted because they can make a positive contribution to caregivers' quality of life. There are also implications for employers providing greater access to flexible and reduced hours options in order to foster a stronger sense of time adequacy. Other research suggests that having a supportive manager and colleagues at work who appreciate caregiving demands is essential for employed caregivers trying to manage time for employment, caregiving, and other responsibilities (Bernard & Phillips, 2007). In addition, government and workplace employment benefits that provide income subsidies to employees providing care or needing to take leave to do so could assist in reducing feelings of inadequate financial resources (Williams et al., 2011).

Although we were able to identify factors associated with caregiver well-being, our study was limited by the use of cross-sectional data that precluded causal claims. Furthermore, we were not able to access any information about the context of care, such as the type of care provided, the nature of the caregiving relationship, or how participants felt about their role, all of which are important considerations for understanding experiences and attitudes towards caregiving, as well as quality of life. Employed caregivers with high caregiver demands may have opted not to complete the survey, so the data may not be fully representative of people with these dual roles. Finally, due to the limitations of secondary data analysis, we used work–life interference as a proxy for work schedule fit. Although it may produce similar results in relation to overall well-being, the results may not be directly comparable to other studies that address work schedule fit more directly.

Conclusion

The work–life fit model proposed by Moen et al. (2008) provided a useful framework for examining the relationship between external demands for employed caregivers, in the form of caregiving hours, and perceptions of well-being. When hours of caregiving are high, overall well-being can be compromised, particularly if employed caregivers have inadequate time for important relationships and commitments in other life domains and perceive their financial resources as inadequate. Well-being was more strongly associated with sense of community than any other factor in the work–life fit framework, which supports both its importance to understanding quality of life for employed caregivers as well as the value of including measures of community support in subsequent research.

Disclosure statement

No potential conflict of interest was reported by the authors.

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