

Effects of Caregiving on Employment and Economic Costs of Chinese Family Caregivers in Canada

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Abstract A telephone survey with 339 randomly selected Chinese Canadian caregivers examined the employment and economic costs of family caregiving for the elderly. Although the Chinese culture places a strong emphasis on filial obligation, caregiving is not without economic consequences. Caregiver's age, financial adequacy, and employment, caring for an additional care receiver, and levels of assistance in Activities of Daily Living (ADL), were the predictors for economic costs perceived by family caregivers. Caregiver's age, caring for an additional care receiver, and care receiver's financial adequacy were significant predictors for male caregivers. Caregiver's financial adequacy and higher levels of assistance in ADL were the predictors for female caregivers. Policies to support family caregivers should not just focus on the social aspect, but also the financial needs.

Keywords Chinese immigrants · Cost of caregiving · Family caregiving · Financial adequacy

Introduction

Population aging is a global trend. In Canada, the elderly accounted for 13% of the total population in 2001, a 12% increase from 1991. It is expected that the elderly population will comprise over 20% of the total population within the next three decades (Statistics Canada 2005a). Although investments and innovations in medical and health care services

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have played an important part in helping the elderly remain healthy, there is an under-recognized fundamental caring system sustained by family caregivers. In many instances these caregivers provide basic care and support in health, social, emotional, and financial domains, particularly for those who are frail or suffer from chronic illness (Koh and MacDonald 2006). In Canada, 45% of the workforce reported involvement in assisting elderly relatives (Martin-Matthews 1999). Family caregivers often act as the social safety net for elderly care receivers by incurring invisible medical and caring expenses. The focus of this paper is on the effects of caregiving on work and employment of family members who are caring for elderly relatives. Special attention is paid to the family caregivers in the Chinese community, which is the largest visible minority group in Canada.

Literature Review

The psychological, social, and health consequences experienced by family members providing care to elderly relatives have been well documented (Biegel et al. 1991; Cattanach and Tebes 1991; Hinrichsen et al. 1992; Kinney and Stephens 1989; McCallion et al. 1994). Among the psychological consequences of caregiving for seniors, depression was most commonly observed (Baumgarten et al. 1994; Canadian Study of Health and Aging Working Group 1994; Chappell and Penning 1996; Cohen and Eisdorfer 1988; Gallagher et al. 1989; Livingston et al. 1996; Morris et al. 1988; Parker 1990; Schulz et al. 1990). Social strain was experienced when caregivers felt frustrated from a perceived lack of caregiving assistance from other family members (Shaibu and Wallhagen 2002). Family caregivers also reported having less time to spend with their family and friends due to caregiving responsibilities, which in turn affected their emotional life (Neal et al. 1988). In addition, caregivers who were working reported experiencing several adverse health effects more frequently than their non-caregiving co-workers, including difficulty sleeping, frequent headaches, and weight gain or loss (Wagner 1987). Furthermore, caregivers in general took less time off for vacation, relaxation, or rest; and when they did take time off, the time was usually spent caregiving (Health Action Forum of Greater Boston 1989).

Caregiving also affects work and family economics, such as balancing work and providing care to family members (Haddock et al. 2006). Research findings in the United States estimated significant costs of caregiving to both (a) employers due to lost productivity and (b) caregivers due to the loss of income (Metropolitan Life Insurance Company 1999). At an individual level, the time required for caring for a frail elderly relative often amounts to a full-time job (Schulz et al. 2003). Family caregivers took more time off from work, were more often interrupted at work due to family matters, missed more days at work, worked fewer hours than desired, and took more time off without pay, than their co-workers who are non-caregivers (Addington-Hall et al. 1992; Brienbaum and Clarke-Steffen 1992; Brooks 1989; Covinsky et al. 1994; Ferris et al. 1991; Grunfeld 1997; Neal et al. 1988; Scharlach and Boyd 1989; Schulz et al. 2003; Stommel et al. 1993; Stone et al. 1987). Researchers also found that productivity at work was affected by those workers who were family caregivers as they often reported being slower, less effective, and experiencing more problems at work (Enright and Firss 1987; Neal et al. 1988).

These caregivers also missed out on career advancement and promotion opportunities in order to continue providing care, and some even considered leaving their employment position to focus on their caregiving role (Enright and Firss 1987; Gibeau and Anastas 1989; Stephans and Christianson 1986; Stone et al. 1987). A downward spiral becomes

apparent when missed career advancement opportunities are also missed earnings opportunities; earnings that could have been used to lessen the caregiving burden. The personal financial resources of the caregivers undergo rapid depletion when employment activity does not exist at the level and pace needed for replenishing funds.

A general picture of the impact of caregiving on the economic and social areas of Canadian family caregivers' lives was reported in the Cycle 16 of the General Social Survey (GSS) (Cranswick 2002) which examined aging, social support and care provided to people aged 65 years and over. Another study, commissioned by Health Canada (Decima Research 2002), was designed to understand the profiles and issues facing Canadian family caregivers. In these studies, economic and employment-related effects of caregiving were briefly addressed. Caregivers reported reduced work hours, changed work patterns, and lost income as employment-related consequences of providing informal care. Health Canada (Decima Research 2002) findings indicate that caregivers can be located across all income strata. More than a quarter of those surveyed indicated their employment situation had been affected by caregiving demands either in the case of quitting or retiring early, or having to make certain adjustments in their work situation, such as schedule or role changes (Decima Research 2002).

Caregiving also affects the finances of family caregivers in ways other than employment, including medical and daily living costs paid for by caregivers (Fast et al. 1999; Hayman et al. 2001; White-Means and Rubin 2004). In the Health Canada study (Decima Research 2002), 44% of the caregivers reported having paid for expenses as a result of providing care to their family member. Caregivers were most likely to report spending their own money on transportation (e.g., gas, taxi, public transit; 80%), and non-prescription medications (71%), while a smaller proportion reported that they paid for medical supplies (54%), prescription medications (43%), equipment (41%) and homemaking supplies (e.g., housekeeping, meals; 36%). Frequently, these costs of caregiving are not recovered through private insurance programs (Arno et al. 1999).

Despite the findings reviewed, research on family caregivers in ethno-cultural minority populations is inadequate. Knowledge toward these family caregivers lags behind when compared to the population growth of ethno-cultural minorities; a trend associated with the increasing cultural diversity of the Canadian population. Research on family caregivers has very seldom addressed the effect of family caregiving on work and employment of culturally diverse populations. In this study, based upon research conducted with a random sample of Chinese Canadian family caregivers, the effect of family caregiving on employment and economic costs of the family caregivers in the largest visible minority group in Canada (Statistics Canada 2003) was examined. The specific research question in this study was: What are the effects of being a caregiver on work and employment of Chinese family caregivers?

There are a few reasons for this study to focus on Chinese caregivers. In addition to being the largest visible minority group in Canada, Chinese Canadians are often distinguished by their unique culture, norms, and customs. Understanding the effect of caregiving on this ethnic group is an important first step to demonstrate the significance of cultural context in understanding family caregiving for the aging population in a multi-cultural society. The Chinese culture, like many other cultures, such as Latino (Delgado et al. 2004), South Asian (Gupta and Pillai 2000), and Korean (Levande et al. 2000; Sung 2002), places very strong emphasis on family values and cohesiveness. The traditional virtue of *filial piety*, which is highly regarded in the Chinese culture, basically defines how elders should be respected and taken care of by the younger generations. Three major conditions for filial piety include respecting one's parents, not bringing dishonour to

parents, and taking good care of parents (Wing 1995). Research findings also support the fact that filial piety continues to affect how the younger generation of Chinese interact with their elders in China (Chow 2001; Ng et al. 2002; Zhan and Montgomery 2003) as well as in western societies (Jones 1995; Liu et al. 2000). Yet, this may also create a myth that Chinese caregivers are exempt from the negative outcomes and effects of providing family care to their elders. Therefore, it is important to examine the specific effects of caregiving among the caregivers in this ethnic group. Finally, it is expected that the findings will add knowledge concerning the interaction effects of culture and economics on familial caregivers, as it has been established that immigrants are increasingly at greater risk of low income compared to Canadian-born (Picot and Hou 2003) and as immigration is largely responsible for the growth of the Chinese community in Canada; China continues to be the largest country of origin of immigrants (Citizenship and Immigration Canada 2005).

Method

Sampling and Data Collection

The data for this study were collected in a telephone survey from a random sample of Chinese family caregivers in Calgary, Alberta between February and April 2003. Telephone numbers listed by Chinese surnames were identified from the local telephone directory to form the sampling frame. Telephone contact was made with randomly selected telephone numbers. Eligible participants were those who identified themselves as Chinese, 18 years of age or older, and providing care to an older Chinese adult, at least 65 years or older. For the purpose of this study, the types of care ranged from assistance with simple tasks to intensive personal care. The elderly person that one cared for could be residing, or not residing together with the caregiver.

In the local telephone directory, a total of 22,891 telephone numbers listed under 725 Chinese surnames were identified. From this sampling frame, 3,545 telephone numbers were randomly selected. Among them, 1,481 Chinese households were identified, of which 396 individuals reported to be eligible for the study. Finally, 339 participants completed the telephone survey, representing a response rate of 85.6%.

Measures

A structured questionnaire was used during the telephone survey. The questionnaire consisted of questions regarding (a) demographic information of the caregivers and the elderly care receivers, (b) health status of the care receivers, (c) types and amount of caring tasks provided by the caregivers, (d) caregiving burden, (e) impact of caregiving, (f) depressive symptoms of the caregivers, (g) gains of caregiving, (h) attitudes toward providing care to seniors, (i) service use by the seniors, (j) service use by the caregivers, (k) service barriers facing the caregivers, and (l) future caring plans and preferences of the caregivers. The questionnaire took about 30 minutes to complete and was administered by trained interviewers who conducted the interview in the participants' language or dialect of preference as selected from among Cantonese, Mandarin, Toishanese, or English.

The questionnaire also contained questions that were used to measure employment and work-related situations of the caregivers. Employment status of the caregivers was grouped as employed *full time*, *employed part time*, or *unemployed*. Self-rated financial adequacy of

the caregivers was measured by asking them how well their current financial status satisfied their needs along a four-point scale of *very inadequate*, *not very well*, *adequately*, and *very well* corresponding with scores of 1–4 respectively. Personal monthly income and family monthly income of the caregivers were measured by asking the participants to choose their answers from categories of income grouped into \$2,000 intervals (e.g., no income, \$1–\$1,999, \$2,000–\$3,999 etc.).

The participants were also asked whether they had experienced changes in their employment situation since they began providing care to their elderly relatives. A checklist was used for the participants to identify the changes, which included (a) quitting work, (b) quitting jobs, (c) taking unpaid leave of absences, (d) taking paid leave of absences, (e) decreased hours of work, (f) increased hours of work, (g) starting to work outside of the home, and (h) opening a home business.

To measure effects of caregiving on economic costs of caring for an elderly relative, the economic dimension of the Cost of Care Index (Kosberg and Cairl 1986) was used. The Cost of Care Index consists of five dimensions including: (a) personal and social restrictions; (b) physical and emotional health; (c) value; (d) care recipient as provocateur; and, (e) economic costs. The economic costs dimension consists of four items. To ensure the cultural appropriateness of these items for this target population, the items were reworded into a question format. Instead of using the original wording “I feel that ...,” the items were revised into questions that asked participants about their level of agreement. Specifically, the economic costs of informal caregiving were measured by asking participants: (1) Do you agree that caring for your elderly relative is causing you to dip into savings meant for other things? (2) Do you agree that your family and you must give up necessities because of the expense of caring for your elderly relative? (3) Do you agree that your family and you cannot afford those little extras because of the expense of caring for your elderly relative? (4) Do you agree that caring for your elderly relative is too expensive? Participants were asked to respond to each question by choosing an answer along a four-point scale—*strongly disagree*, *disagree*, *agree*, and *strongly agree*, with corresponding scores of 1–4 respectively. All responses were summed to form a total score range of 4–16, with higher scores indicating greater economic costs. When used with the sample in this study, a Cronbach’s alpha of 0.71 was reported.

To examine the factors predicting economic costs, three major groups of variables were examined: (a) socio-demographic characteristics of caregivers, (b) socio-demographic characteristics of care receivers, and (c) caregiving task related variables. Socio-demographic characteristics of caregivers included (a) caregiver’s age, (b) gender, (c) education, (d) marital status, (e) employment status, (f) income, and (g) self-rated financial adequacy. These predictors were logical choices in this study since they all pointed to the socio-economic resources that would affect one’s economic and social capacity to provide informal caregiving.

Flowing from the socio-demographic characteristics of caregivers listed above is the phenomenon known as the *sandwiched generation*; the simultaneous care being provided to children below 18 years of age and grandparents of those same children. Since caring for additional family members or relatives can add burden, as well as economic costs to the caregiving process, a few questions were included to ask the caregivers whether they had more than one elderly person in the same household; whether they had to take care of other elderly person(s); whether they had children younger than 13 years of age under their care, and whether they had to care for children between 13 and 17 years of age.

Socio-demographic characteristics of care receivers include care receiver’s (a) age, (b) gender, (c) marital status, and (d) level of financial adequacy rated by the caregiver. These

predictors were selected based on Statistics Canada (2005b) findings showing that older care receivers tend to receive greater levels of care, which has, in turn, been associated with poorer health status. Age of the care receiver was measured by the chronological age of the care receiver at the time of the interview.

Gender was grouped into male and female. Marital status was grouped into married and unmarried. Financial adequacy of the care receiver was measured subjectively by asking the caregiver to rate the adequacy level of the care receiver's financial status along a four-point scale of *very inadequate*, *not very well*, *adequately*, and *very well* corresponding with scores of 1–4 respectively. Both marital status and financial adequacy also reflect the social and financial resources of the care receivers to acquire the care they need.

Variables related to caregiving tasks included levels of assistance provided to the care receivers in Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). Also included as a predictor, was whether or not the caregiver was the primary or secondary care provider. A binary-coded question was asked to determine whether the caregiver would consider oneself as *primary caregiver* (coded as 1) or *secondary caregiver* (coded as 0). Assistance provided to the care receivers in ADL and IADL was measured by asking the caregivers to rate the level of assistance that they provided to the care receiver in ADL (dressing, grooming, toileting, bathing, ambulation, transfer, and eating) and IADL (medication administration, meals preparation, housework, use of telephone, shopping, money management, use of transportation, and interpretation/translation) along a four-point scale ranging from *none* (0) to *a lot* (3). All responses were summed and divided by the total number of items in each of the lists. The resulting score ranged between 0 and 3 with higher scores representing a higher level of assistance provided to the care receivers.

Results

Characteristics of the Chinese Caregivers and Care Receivers

The demographic characteristics of the caregivers and the care receivers are presented in Table 1. All the caregivers identified themselves as ethnic Chinese. The interviews with the caregivers were mainly conducted in Cantonese (77%), followed by Mandarin (8.8%), English (8.8%), Toishanese (5%) and other Chinese dialects (0.3%). Most (94.4%) of the Chinese caregivers in this study were first-generation immigrants, and only 5.6% reported being born in Canada. The mean length of residency in Canada for the immigrants was 18.39 years (SD = 10.07, range: 3–53). Cantonese was the most common dialect spoken by the caregivers at home (72%), then English (8.6%), Mandarin and Toishanese (both 7.7%), and other dialects or languages (4.2%), such as, Chiu Chow, Fujianese, Shanghaiese, and Vietnamese.

Most (65.5% or 222 persons) of the caregivers were female. Over half (54.7%) of the caregivers were between 35 years and 54 years of age, about one in fifth (19.2%) were between 18 and 34 years old and over a quarter (26.1%) were 55 years and over. Daughters accounted for over one third (35.4%) of the caregivers, sons accounted for 22.4%, daughter-in-laws for 11.8%, wives for 13.3%, husbands for 5.3%, and son-in-laws for 4.1%. Over three quarters (76.7%) of the caregivers interviewed were married, and the rest were never married, divorced, or separated. Close to half (47.2%) of the caregivers reported an education level of post-secondary and above. Those with a secondary-level education accounted for 38.8%, followed by elementary-level (11.0%) and no formal education (3.0%). The average age of the care receiver was 74.6 years old with a standard

Table 1 Descriptive statistics of the study variables

Variable	Mean (SD)	Percent
CG age:		
18–24 years		3.8
25–34 years		15.4
35–44 years		28.7
45–54 years		26.0
55–64 years		10.7
65–74 years		12.4
75 & above		3.0
CG gender:		
Male		34.5
Female		65.5
CG marital status:		
Married		76.7
Single		23.3
CG education:		
No formal education		3.0
Primary		11.0
Secondary		38.8
Post-secondary & above		47.2
CG income:		
No income		13.3
\$1–\$1,999		63.1
\$2000 and above		23.6
CG immigrant status		94.4
CG financial adequacy (range: 1–4)	2.8 (.5)	
CG being a primary caregiver		67.8
CG having child(ren) younger than 13		36.9
CG having child(ren) between 14 and 17		17.4
CG having other elderly person(s) at home		27.1
CG caring other elderly person(s)		17.4
CR age (years)	74.6 (6.9)	
CR gender:		
Male		43.1
Female		56.9
CR marital status:		
Married		54.0
Single		46.0
CR number of illnesses (range: 0–14)	3.0 (2.1)	
CR ADL caring tasks (range: 0–3)	.1 (.4)	
CR IADL caring tasks (range: 0–3)	.9 (.8)	

Note. CG = caregiver, CR = care receiver

deviation of 6.9 years. Just over half of the care receivers (56.9%) were female, and the most common marital status among care receivers of both genders was married (54%).

Health and Related Caregiving Tasks

Among the caregivers, 67.8% identified themselves as a primary caregiver while the remaining participants considered themselves as non-primary caregivers, meaning that

another person was providing the major care responsibilities, and the participant was playing a supplementary role. According to the caregivers, an overwhelming 92.3% of care receivers reported at least one type of major health problem or illness. Examples of major health problems within the sample of care receivers included problems with joints, the back and arthritis (55.8%), high blood pressure (54.6%), eye problems (29.5%), high cholesterol (26.8%), problems with hearing (25.7%), and problems with physical mobility (25.7%). On average, the care receivers were reported to have three types of health problems or chronic conditions ($SD = 2.1$).

The portion of the caregivers who reported providing assistance in basic personal care activities of daily living ranged between 1.5 and 15.9%, and these activities were reported as follows: (a) ambulation (15.9%), (b) dressing (6.8%), (c) bathing (6.8%), (d) transfer (5.6%), (e) grooming (4.4%), (f) toileting (4.1%), and (g) eating (1.5%). However, a relatively larger portion of the caregivers (ranging between 13.6% and 79.4%) reported providing help in instrumental daily living activities such as (a) interpretation (79.4%), (b) use of transportation (66.7%), (c) shopping (54.6%), (d) money management (44.0%), (e) house chores (33.0%), (f) using the telephone (31.6%), (g) meal preparation (25.4%), and (h) medication (13.6%).

Among the Chinese caregivers, over a third (36.9%) of them reported having to provide care to at least one child younger than 13 years old. In addition, another 17.4% of the caregivers reported having at least one child between 14 and 17 years old. Over a quarter of the caregivers have another elderly person at home in addition to the elderly care receiver who they provide care. Close to one in five of the caregivers also have to provide care to another elderly person.

Economic Impact of Caregiving

Among the family caregivers, less than half (40.5%) reported being employed full time and 17.2% reported being employed part time. The remaining 42.3% of caregivers reported not being employed at the time of the study. They were either retired (18.6%), in the process of looking for a job (17.2%), or had never been employed (6.2%). Approximately 13% of caregivers reported making some form of change to their employment situation due to caregiving responsibilities. The results indicated that 2.9% of the caregivers reported quitting work; 2.9% reported changing jobs; 1.8% took unpaid leave of absences; 1.8% took paid leave of absences; 5% decreased hours of work; 2.9% increased hours of work; and 0.3% opened home businesses.

In this study, over a tenth (13.3%) of the family caregivers reported not having any income. Close to two thirds (63.1%) of the caregivers reported a personal monthly income of less than \$2,000 while about a quarter (23.6%) reported a personal monthly income of \$2,000 and over. Most of the family caregivers reported their self-rated financial adequacy as either *very well* (4.1%) or *adequately* (74.3%). About one fifth (19.2%) reported *not very well* and 2.4% *very inadequate*. In this study, over half of the Chinese family caregivers felt that their family must give up necessities because of the expense of caring for their elderly relative (58.0%). As well, three quarters (74.6%) of respondents had found that caring for their elderly relative had caused them to dip into savings that were meant for other things.

The economic dimension of the Cost of Care Index (Kosberg and Cairl 1986), which yields a score range between 4 and 16, with higher scores indicating greater economic costs was used; a moderate mean score of 9.69 and median of 10 ($SD = 2.2$) were reported.

The predictors of economic costs were examined by hierarchical multiple regression analysis using the enter method. Predicting factors were entered in blocks, beginning with socio-demographic variables of caregivers, followed by socio-demographic variables of care receivers, and finally the health-related variables related to number of health conditions of the care receivers and the level of assistance provided to care receivers in ADL and IADL.

The results for the multiple regression analysis are presented in Table 2. When only socio-demographic variables of the caregivers were entered, caregivers (a) at an older age, (b) with a poorer level of financial adequacy, (c) not working or working part time, and (d)

Table 2 Multiple regression analysis—predictors for economic costs (*N* = 339)

Predictors	Model 1 <i>β</i>	Model 2 <i>β</i>	Model 3 <i>β</i>
Demographic variables of caregivers			
Age	.17*	.18*	.18*
Gender: Male ^a	−.05	−.05	−.06
Marital status: Married ^b	−.09	−.12	−.12
Education	−.09	−.08	−.11
Income	.05	.06	.05
Self-rated financial adequacy	−.24**	−.17**	−.19**
Employment status ^c			
Working part time	.13*	.13*	.12*
Not working	.16*	.19*	.17*
Being primary caregivers ^d	−.07	−.08	−.08
Having child(ren) younger than 13 ^e	.05	.05	.06
Having child(ren) between 13 and 17 ^f	.00	.00	.00
Having other elderly person(s) at home ^g	−.14	−.13	−.14
Caring other elderly person(s) ^h	.18*	.18*	.20*
Demographic variables of care receivers			
Age		−.04	−.05
Gender ⁱ -Male		−.03	−.03
Marital status-Married ^j		−.04	−.05
Education		.07	.06
Self-rated financial adequacy		−.17**	−.16*
Health variables of care receivers			
Number of illnesses			.00
ADL			.20**
IADL			−.12
R ² Change	.168**	.025	.030*
R ²	.168	.193	.223
Adj R ²	.132	.144	.167

Note. Reference group: ^afemale (caregivers), ^bsingle (caregivers), ^cworking full time (caregivers), ^dnot being primary caregivers (caregivers), ^enot having child(ren) younger than 13, ^fnot having child(ren) between 13 and 17, ^gnot having other elderly persons at home, ^hnot caring other elderly person(s), ⁱfemale (care receivers), ^jsingle (care receivers)

p* ≤ .05, *p* ≤ .01

caring for another elderly person at home were significant predictors of a higher level of economic costs. When adding care receivers' socio-demographic variables, the findings indicated that a poorer level of financial adequacy of the care receivers also predicted a higher level of economic costs while all the predicting effects of the socio-demographic variables of the caregivers remained significant in the same fashion. In the final model when the health-related variables were added, a new predictor was identified. Caregivers providing a higher level of assistance in tasks of ADL reported a higher level of economic costs. At the same time, as found in the two former models, a higher level of economic costs was predicted by (a) caregivers' poorer level of financial adequacy, (b) caregivers not working or working part time, and (c) care receivers' poorer level of financial adequacy. In the final model, all the predictors accounted for 16.7% of the variance in economic costs.

Based on the discussion and findings in previous research literature, it is clear that there are gender differences in caregiving (Ashley and Kelnipeter 2002; Bookwala and Schulz 2000). Therefore, further analysis was conducted to identify the gender differences in predictors for economic costs of caregiving. The findings of the hierarchical multiple regression analysis, using the enter method, are presented in Table 3. For the male caregivers, when the caregivers' socio-demographic variables were entered into the regression model, caregivers who were older in age reported a higher level of economic costs. In addition, having another elderly person at home reduced the predicted economic costs. However, family caregivers who reported providing care to another elderly person reported a higher level of economic costs. When adding the care receivers' socio-demographic variables, age and employment status of the caregivers were significant in predicting a higher level of economic costs. Specifically, for the male caregivers, those who were older in age and not working reported a higher level of economic costs than those who were younger and the ones working full time. In addition, among the demographic variables of the care receivers, poorer financial adequacy of the care receivers predicted a higher level of economic costs. When the final block of health predictors was entered into the model, the effect of caregivers' age and caring for another elderly person remained positively significant. A poorer level of financial adequacy of the care receiver continued to predict a higher level of economic costs. Caregivers reported a higher level of economic costs when their care receivers needed a higher level of care in personal activities of daily living. In the final model, a total of 23.7% of the variance in economic costs was explained.

For the female caregivers, poor financial adequacy of the caregivers was the only significant predictor of economic costs when the first block of predictors was entered. The predicting effects of this variable remained when adding the socio-demographic variables of the care receivers in the second model. However in the second model, none of care receivers' socio-demographic variables were significant. In the final model when the health variables were added, caregivers providing more assistance in tasks related to ADL predicted a higher level of economic costs. Also, the predicting effect of the female caregivers' financial adequacy level remained significant in the same fashion. The significant predictors identified in the final model accounted for 15% of the variance in economic costs for the female caregivers.

Discussion

This study examined the Chinese Canadian caregivers' economic costs of providing care for the elderly family members or relatives. The study has brought two new dimensions to

Table 3 Predictors for economic costs of male and female caregivers

Predictors	Male (n = 117)			Female (n = 222)		
	Model 1 β	Model 2 β	Model 3 β	Model 1 β	Model 2 β	Model 3 β
Demographic variables of caregivers						
Age	.34*	.41*	.40*	.12	.11	.11
Marital status: Married ^a	-.17	-.26	-.26	-.04	-.07	-.07
Education	-.10	-.11	-.20	-.08	-.09	-.09
Income	.02	.13	.16	.01	-.01	-.03
Self-rated financial adequacy	-.04	.13	.10	-.31**	-.29**	-.30**
Employment status^b						
Working part time	.00	-.07	-.06	.13	.13	.11
Not working	.17	.26*	.22	.12	.12	.11
Being primary caregivers ^c	-.09	-.13	-.16	-.07	-.07	-.08
Having child(ren) younger than 13 ^e	.01	.05	.07	.06	.06	.06
Having child(ren) between 13 and 17 ^f	-.08	-.05	-.05	.03	.03	.04
Having other elderly persons(s) at home ^g	-.40*	-.32	-.32	-.04	-.06	-.06
Caring other elderly person(s) ^h	.33*	.29	.33*	.13	.13	.14
Demographic variables of care receivers						
Age	-	-.09	-.10	-	.00	.00
Gender ^h : Male	-	-.01	.00	-	.00	-.01
Marital status: Married ⁱ	-	-.17	-.21	-	.03	.05
Education	-	.13	.11	-	.07	.06
Self-rated financial adequacy	-	-.38*	-.40**	-	-.09	-.08
Health variables of care receivers						
Number of illnesses	-	-	.09	-	-	-.02
ADL	-	-	.25*	-	-	.20**
IADL	-	-	-.27	-	-	-.09
R ² Change	.218*	.118*	.050	.188**	.013	.029
R ²	.218	.336	.386	.188	.201	.231
Adj R ²	.114	.203	.237	.139	.131	.150

Note. Reference group- ^asingle (caregivers), ^bworking full time (caregivers), ^cnot being primary caregivers (caregivers), ^dnot having child(ren) younger than 13, ^enot having child(ren) between 13 and 17, ^fnot having other elderly person(s) at home, ^gnot caring other elderly person(s), ^hfemale (care receivers), ⁱsingle (care receivers)

* $p \leq .05$, ** $p \leq .01$

research on family caregiving. Unlike most other studies (Brienbaum and Clarke-Steffen 1992; Covinsky et al. 1994; Stommel et al. 1993) which provided a descriptive understanding toward the economic costs and impact of providing family caregiving to the aging population, this study went further to analyze the variation in self-perceived economic costs and its related predictors. Secondly, this research study is probably one of the few studies examining economic costs and consequences of family caregiving in an ethnic minority community in Western society. The findings serve to provide a better understanding toward economic costs of family caregiving in a socio-cultural context that few researchers have addressed.

Over half of the Chinese family caregivers were working, either full time or part time. Despite the common understanding that many people in the Chinese culture are eager and willing to fulfill the social and moral expectations of providing care to their elderly parents, grandparents, and family members, it does not spare them from caregiving-related employment and economic consequences. As noted in the findings, various types of employment and financial-related trade-offs or impacts were reported by the Chinese family caregivers.

The findings point to a few significant predictors of economic costs. For the sample taken as a whole, the self-rated financial adequacy of both caregivers and care receivers, the caregiver's employment status (part-time or not working), higher levels of ADL assistance, and caring for an additional elderly care receiver, were the significant predictors of perceived economic cost. Poor financial status predicts higher levels of economic costs of caregiving. This finding is understandable since for those who do not have adequate financial resources, they can easily feel the financial burden of caregiving responsibilities. It is also the case for family caregivers who had to provide care to more than one elderly care receivers. Caregivers working full time reported a lower level of economic costs than those working part time or not working. This can be explained by the fact that those who work full time are more likely to have the financial resources to alleviate the financial burdens associated with the economic costs of caregiving. However, when controlled for gender, this effect of employment status disappeared, meaning that there may be other gender related-factors that play a role in affecting perceived economic costs.

For instance, the findings have shown that the economic costs of the male caregivers appear to be more related to the age of the caregivers, which affects one's financial or earning capacity and the financial status of the care receiver; which further affects one's adequacy of financial resources to providing care. The fact that age is significant for men and not women in predicting economic costs is interesting, when we consider that age is a factor in both human development and labor market participation. Perhaps age acts as a constant for females for cases where female caregivers are chronically disadvantaged in labor market participation throughout their life cycle. Most importantly, they are often the ones who are expected to shoulder the caregiving role in most of their life course in various roles and capacities as a daughter, a spouse, a mother, a daughter-in-law, or even an aging mother.

At the same time, female caregivers are largely under the influence of their own financial status, their additional caregiving responsibilities to other elders, and the amount of personal care that they have to provide. The relationship between a woman's financial status and her perceptions of economic caregiving costs is obviously understandable however, the significance of the other two predictors probably speaks to the fact that many female caregivers have to provide out-of-pocket expenses or give up their own employment to provide care to others on a day-to-day basis, making them feel even more economically vulnerable.

Another interesting observation is that the amount of caregiving tasks performed is a significant predictor of economic costs for both the male and female caregivers. However, the effect of the caregiving tasks in personal activities of daily living, on the economic costs, is more important for males than females. A plausible reason for this difference in the provision of caregiving tasks is gender. Generally, most of the personal caring tasks are performed by females rather than males, as shown in previous research findings (Lutzky and Knight 1994; Ory et al. 2000). Therefore, female caregivers are probably more likely to be accustomed to the caregiving tasks than male caregivers, thus reducing the perceived economic impact.

A related issue is the financial status of caregivers. Greater levels of care provided to elderly relatives are often responsible for decreased time in the labor market. In addition to hours of employment, the female Chinese Canadian caregivers in this study, who are mostly first generation immigrants, may be further disadvantaged in their occupational status and concomitant earnings levels. More time spent on caregiving within this context would then translate to fewer hours of employment at wages lower than males and/or Canadian-born counterparts. This is probably the reason why self-perceived financial adequacy is significant for female caregivers but not for male caregivers.

In Canada, over one-third of non-elderly caregivers have incurred additional expenses while in a caregiving role, as did over a quarter of seniors (Decima Research 2002). Consistent with the national study (Decima Research 2002), this study found that caregiving affects the caregivers' employment situation of the Chinese family caregivers. Across Canada 2% of caregivers aged 45–65 have left their paid position due to their duties as a caregiver (Decima Research 2002), this proportion is lower than the 2.9% reported by the Chinese family caregivers within the same age range in this study.

As clearly indicated in this study, caregiving affects employment and economic costs, even in a cultural context in which filial obligation is highly regarded. The findings further support the fact that these economic costs are often invisible, adding to the financial burden of the family caregivers through loss of income, out-of-pocket expenses, loss of paid vacations, loss of retirement benefits, and accumulated income protection. In view of the financial challenges facing family caregivers due to caregiving responsibilities, as well as the significant role that financial factors play in caregiving, it is important for policy makers to develop fiscal policies and programs that gear toward the situation of family caregivers. For Chinese family caregivers, it is also important to tailor the policies and programs to meet their specific needs. For a lot of the family caregivers in this ethno-cultural minority group, many belong to immigrant families living in intergenerational households. The additional financial burden and language barriers they face as immigrants, and the caregiving burden and stress associated with providing care to both the younger and older generation in the same household, are the unique socio-cultural circumstances that policy makers should address.

According to a Canadian study, 42% of caregivers believed that it would be very helpful to have flexible work hours, while an equal proportion stated their interest in short-term jobs and income protection supported by the federal government's Employment Insurance program. Only 18% of the respondents perceived having a leave of absence without pay as useful to them. This can be interpreted that most of the caregivers could not afford to lose their employment income (Decima Research 2002). This may particularly be the case for many Chinese immigrants who are often faced with the double challenges of struggling to settle in the host country while having to shoulder the obligation and actual responsibilities of providing care to their elders.

Although Chinese caregivers are well known for their commitment in taking care of their elderly family members and relatives, their commitment and filial obligation should not be taken for granted. These financial challenges and impacts, if unaddressed, may further hinder their capacity and endurance in support of the elders in their community. Based on the findings, we recommend that policies and programs have to be in place to address financial needs and economic security of these family caregivers. Particularly noteworthy is the context of female Chinese Canadian family caregivers who, in addition to their caregiving challenges, often suffer from the double jeopardy of being at risk of various forms of discrimination such as sexism and racism when attempting to secure gainful employment and financial stability.

Limitations

As in many other survey research studies, there are limitations in this current one. The first limitation is the relatively small sample size. Although a randomized sample was used, the localized nature of the sample did not allow the findings to be generalized to Chinese family caregivers in other localities in Canada. The use of a telephone survey might have excluded family caregivers who were too exhausted to attend to telephone calls, those who do not have a telephone at home, or those who lack the English language capacity needed to feel comfortable in answering the telephone. The use of Chinese surnames listed in the telephone directory could have excluded Chinese participants who adopt a non-Chinese surname. The use of the self-report data collection method may not be able to capture the actual health status of the care receivers, which could have a direct impact on the economic consequences of family caregiving. The wide range of caregiving responsibilities reported by the family caregivers in this study signified the potential differential effects of family caregiving on economic costs.

Conclusion

To conclude, the findings in this study confirm the fact that although many Chinese family caregivers are thought to be holding the strong cultural value of filial obligation, there are economic consequences and costs associated with providing care to the elderly family members or relatives. The multiple challenges facing the family caregivers are noted in this study. The financial challenges facing many of these Chinese family caregivers, the majority of whom are immigrants, plus the actual caregiving tasks and responsibilities increase the economic costs associated with family caregiving, as well as the vulnerability for these family caregivers. Even with a job, the economic costs of providing family care are not relieved. As too heavy economic costs and burden are likely to affect the well being of family caregivers in the long term, policies and programs to alleviate the financial burden and to provide social and financial support for these family caregivers are important for both the family caregivers and their care receivers.

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