

Cultural Predictors of Caregiving Burden of Chinese-Canadian Family Caregivers*

Daniel W.L. Lai
University of Calgary

RÉSUMÉ

Les communautés culturelles se font de plus en plus nombreuses au Canada, tandis que les connaissances sur la prestation de soins familiaux auprès des personnes âgées dans ces milieux ethniques différents stagnent. L'étude examine l'influence de la culture, qui s'exprime par certains paramètres, sur le fardeau des dispensateurs de soins familiaux dans une communauté canadienne d'origine chinoise. L'échantillon tiré au hasard comprend 339 Canadiens d'origine chinoise, dispensateurs de soins auprès d'un proche âgé, qui ont répondu à un sondage téléphonique. L'analyse de régression multiple hiérarchique rend compte de l'effet des paramètres culturels sur la lourdeur du fardeau des soins. Selon les constatations, le fait d'être un immigrant, de religion occidentale ou non, plutôt qu'athée, éprouvant peu de piété filiale sont des indicateurs prévisionnels d'un très lourd fardeau de soins. La tradition chinoise n'exempte pas le dispensateur de soins de son fardeau. Les politiques et les pratiques devraient combler les besoins des dispensateurs de soins familiaux en fonction des facteurs intraculturels précisés dans l'étude.

ABSTRACT

The growth of research knowledge on culturally diverse family caregivers for the aging population lags behind the increase of culturally diverse populations in Canada. This study examines the effects of culture, as manifested through cultural variables, on the caregiving burden of family caregivers in a Chinese-Canadian community. A random sample of 339 Chinese-Canadian caregivers for elderly relatives completed a telephone survey. Results of hierarchical stepwise multiple regression analysis reported the predicting effects of culture-related variables on caregiving burden. The findings indicated that being an immigrant, having a Western or non-Western religion as compared to having no religion, and having a lower level of filial piety, predicted a higher level of caregiving burden. Chinese tradition does not exempt the caregivers from being burdened. Policies and practices should address the needs of family caregivers according to the intra-cultural variations identified in this study.

* Funding for this research was received from the Alberta Heritage Foundation for Medical Research. Completion of this manuscript was supported by the Hidden Costs and Invisible Contributions Project funded through the Major Collaborative Research Initiative Program of the Social Sciences and Humanities Research Council of Canada. The author would also like to thank Jacqueline Berger, Wendy Leonenko, Phyllis Luk, and Grace Leung for their assistance in preparing this manuscript.

Manuscript received: / manuscrit reçu : 5/01/06

Manuscript accepted: / manuscrit accepté : 19/01/07

Mots clés : vieillissement, culture, prestation de soins familiaux, Chinois, dispensateurs de soins familiaux, fardeau, minorité ethnique

Keywords: aging, culture, caregiving, Chinese, family caregivers, burden, ethnic minority

Requests for offprints should be sent to:/Les demandes de tirés-à-part doivent être adressées à :

Daniel W.L. Lai, Ph.D.,
Faculty of Social Work, University of Calgary,
2500 University Drive NW,
Calgary, AB T2N 1N4
(dlai@ucalgary.ca)

Population aging is a reality facing Canada's population. Investments in medical innovations and health care services continue to be developed to help the elderly remain healthy. At the same time, a caring system that is not well recognized is sustained by family caregivers, who provide basic care in health,

social, emotional, and financial domains, particularly for those who are frail or suffer from chronic illness. People over 65 will comprise over 20 per cent of the population within the next two decades (Statistics Canada, 2002). About 12 per cent of the general Canadian population reported providing informal,

unpaid assistance to an elderly person (Statistics Canada, 2002). More emphasis is being laid on providing care to the elderly for home care rather than institutional care (Grunfeld, 1997), leaving much of the responsibility of caring for the elderly to unpaid family members.

Previous research found that caregiving affects caregivers in family, health, and finance. Research indicated that many caregivers of frail seniors suffer from psychological, social, and physical problems (Biegel, Sales, & Schulz, 1991). Researchers have reported an increased rate of depression and stress among family caregivers (Chappell & Penning, 1996).

Studies conducted in Canada also reported similar effects of caregiving on family caregivers (Cranswick, 2002; Decima Research, 2002). For instance, Canadian caregivers who were employed were likely to report feeling more stress than those who were not (Decima Research). The same study also reported that caregiving brought hardships upon caregivers and negative impacts on their physical health. Caregivers also reported that their sleep patterns had been disrupted (Cranswick).

Caregiving also affects work and family economics. Essentially, the time required for caring for a frail elderly relative is often equivalent to a full-time job (Schulz et al., 2003). Findings have shown that family caregivers take more time off work, are more often interrupted at work as a result of family matters, miss more days at work, work fewer hours than desired, and take more time off without pay than their non-caregiving co-workers (Schulz et al.). Researchers also found that productivity at work was affected by workers who were also family caregivers, as they often reported being slower in work, less effective, and experiencing more problems at work (Neal, Chapman, & Ingersoll-Dayton, 1988). These caregivers also missed out on career advancement and promotion in order to continue providing care, and some even considered leaving their employment to continue with their caregiving role (Gibeau & Anastas, 1989). On the family and social fronts, family caregivers reported having less time to spend with their family and friends because of caregiving responsibilities, which in turn affected their emotional life (Neal et al.). All these factors are interrelated and therefore caregiving affects personal health, work, and economics as well as social and family lives.

With all the changes, challenges, and caregiving expectations, it is understandable that the consequences associated with caregiving have direct and indirect cost-related effects on the community, economy, and health care system. Health problems and challenges facing caregivers may strain the health

care system if solutions are not found to provide comprehensive support, and economic productivity may suffer if caregivers are not supported to function well in the workplace. Although the research findings reviewed above have provided a general picture of the experiences associated with family caregiving, our understanding of caregiving experiences in the context of culture and ethnicity is limited.

In Canada, 13.4 per cent of the Canadian population was composed of visible minorities in 2001, representing a 52.3 per cent increase from 8.8 per cent in 1991 (Statistics Canada, 2003). In Canada, visible minorities are defined by the federal Employment Equity Act as "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour" (Statistics Canada, 2003). Also, in the daily practice of service providers who work with older adults and their family caregivers, an increasing number of the clients they provide care to are ethnic minorities. This includes those who are new to Canada and may speak different languages or have different cultural values and beliefs. Yet little research has been done to systematically examine family caregiving among ethno-cultural minority communities. Therefore, it becomes increasingly important for policy makers and service providers to understand the potential implications of cultural differences on family caregiving for the elderly population from culturally diverse backgrounds as well as the cultural context of family caregiving.

Culture and Family Caregiving

Culture provides a framework of values and practices that form a context for people's lives. As described by Abramson, Trejo, and Lai (2002), "Culture dictates who we are and how we respond to the world around us. It also sets the stage for how and what people believe; how they behave, solve problems, and communicate; how their identity and interpersonal relationships develop; how they adjust to change, handle stressors, and ultimately cope" (p. 21). Culture manifests through components/indicators including, but are not limited to language, country of origin, ethnic origin, ethnicity, religious/spiritual beliefs, race, cultural norms, cultural values, and beliefs. Every aspect of human life is influenced by culture, and caregiving is no exception. Previous research on culture and caregiving focused largely on comparing ethnic group differences in caregiving. Four key themes can be identified in these types of studies.

First, differences in values and beliefs of family caregiving were identified among different ethno-cultural groups. For example, the literature has demonstrated that traditional Japanese families have

rules to govern an individual's perceptions of duty, obligation, and responsibility, including elements of filial piety such as family members' attitudes towards and sense of self-sacrifice for their elders (Nishi, 1995). Children in the Chinese culture are expected to fulfil their parents' expectations and to try their best in helping aging and/or ill parents, including the exhaustion of personal resources (Fung, 1998). The development of these expectations and obligations is a lengthy socialization ingrained in cultural values and beliefs. For instance, female Chinese- and Filipino-American caregivers have been "raised to accept responsibility" of caring for family members; caregiving in their eyes is an obligation and a "cultural and moral mandate" (Jones, 1995, p. 394).

Reciprocity is at the core of the social contract of obligations (Hishimoto, 1996). On the one hand, some elderly parents embrace a belief that parental caregiving is a reciprocal relationship contributing to the credit in raising their children. On the other hand, grown up children may also see providing care to their elderly parents as a way of giving back. For example, in the work based on a Taiwan village, Stafford (1995) points out how mothers are expected, just the same as mothers are elsewhere, to nurture their children. And in return, according to the Confucianism framework, the grown-up children will be expected to take care of their elderly parents. This nurturing pattern sets the foundation for giving and receiving in later life and bringing honour and glory to the families.

In South Asian cultures, adult children strongly believe that providing care to their elders is their duty (Gangrade, 1999). Lee (1995) also pointed out that there is a dramatic difference between Western and Korean concepts. Western societies consider independence an ideal state for an older person, whereas Koreans expect elders to become dependent as they age – an expectation based on Korean social values, which encourage children to be filial to their parents. In a comparison of American and Korean caregivers, findings reveal that both groups are motivated by their affection, love, and filial obligation to care for their aging parents. However, American caregivers refer to love and affection more frequently (Walker, Pratt, Shin, & Jones, 1990), while Korean caregivers' motivation for caregiving is based primarily on filial responsibility, which is strongly influenced by the Confucian core values of respect for parents, family harmony, and sacrifice for parents (Sung, 1994).

Cultural obligation is a directive force for motivating daughter caregivers to respond to the daily needs of their aging parents (Holroyd, 2001). This directive

force of public opinion shapes not only everyday caregiving practices but also women's perceptions of correct moral behaviours. In a study on Chinese caregiving daughters, Holroyd further confirmed that the Chinese caregiving daughters did mind what others thought of them. It was essential for them to uphold at least a specious morality in the public eye. While traditional cultural values define expectations of how the elderly should be cared for, it creates problems for the new generation, since adult children may not share the same filial views (Holroyd, 2002). In Korea, traditional family values have long supported the norm of elderly parental caregiving. However, Korean ways of thinking are also changing, resulting from the decline of Confucian traditional beliefs among the younger generations (Chee & Levokoff, 2001).

Second, cultural variations define how roles and responsibilities of caregiving are allocated in different cultures. In the Chinese culture, "kin" is considered the first wave of protection (Holroyd, 2001). In both Chinese and Japanese cultures, the eldest son is expected to take care of elderly parents, with the understanding that he will eventually run the family household and inherit the family wealth (Markides & Mindel, 1987). Women in these two cultures also carry the defined caregiving role (Goodman, 1990), involving not only tasks and arrangements for older persons, but also management of affective relationships. On the other hand, Korean caregivers are more likely to be daughters-in-law; Korean-American caregivers are more likely to be daughters; and Caucasian American caregivers are more likely to be wives or daughters (Lee & Farran, 2004). For Latinos, there is a strong commitment to family, and therefore many of them, particularly the women, provide care for their elderly family members – a phenomenon supported by Latino under-representation as users of formal community services (Burnette & Mui, 1995). Yet as the structure of Latino immigrant families and the social roles of Latino immigrant women change, women may not be as available as they traditionally have been to care for the elderly (Delgado & Tennstedt, 1997).

Third, differences in caregiving outcomes are reported between different ethno-cultural groups. Research on caregiving outcomes focuses mainly on burden, stress, and depression. In the experiences of African-American and Caucasian caregivers (Cox, 1995), African-American caregivers reported a lack of emotional support and consequently reported receiving more hours of informal assistance. Cox has further explained that African-American caregivers probably maintain stronger adherence to filial responsibility and norms, but may be susceptible to stress

when they feel incapable of fulfilling these cultural expectations.

Korean female caregivers in Korea are more depressed than Korean-American and Caucasian American female family caregivers. Korean wives and Korean-American wives are the most depressed, while Korean-American daughters-in-law are the least depressed (Lee & Farran, 2004). Differences in cultural and social roles are the reasons for the differences in the occurrence of depression between caregivers of different ethnic groups (Lee & Farran, 2004). In addition, culture fuels the endurance of family caregivers. Chee and Levokoff (2001) have found that despite the extremely difficult circumstances Korean caregivers are under, they continue to be willing to provide care to their frail parents who have dementia, out of the expectation of filial sacrifice. Zhan and Montgomery (2003) have also indicated that women who take on the role of caregiver under the influence of filial piety are likely to live longer but be more financially dependent and have fewer children available to help them. For these women caregivers, the structural factors such as family size, lack of pension for elders, and caregivers' employment status and income, could have an affect on them. In Gupta and Pillai's study (2002), the cultural context of providing care remains essential, even though the strength of cultural influence on caregiver burden is not as strong as expected. As well, the researchers found that identification with Asian cultural norms and size of support network tends to lessen the caregiver burden. As caregiving tasks, role conflict, and role overload increased, the amount of caregiver burden increased. The belief in filial piety thus played an important role in lowering perceived levels of burden of caregiving.

On the other hand, family caregiving for the elderly is stressful. It negatively affects caregiver's health outcomes, regardless of societal values (i.e., filial piety) and familism regarding parent care (Kim & Lee, 2003). For example, for Korean caregivers in Western cultures, researchers found that the caregivers reported a relatively high level of depression, and more Korean caregivers rated their health as "poor" than did Western caregivers (Kim & Lee).

Despite all the discussions on cultural values and beliefs concerning filial obligation, it should not be presumed that all families are able to provide the support required by their frail elderly relatives. Even when family members desire to provide assistance to fulfil the expected obligations, they may not have the resources to meet the needs of

the elderly relatives (Lockery, 1991). Caregivers' concerns over not being able to meet the expected obligations for care can cause stress and may further cause them to experience guilt as they are not able to fulfil social expectations and roles (Cox, 1992). Also, they may be seen as deviant from the social norm of providing care to their elderly relatives (Cox). As a result, the more closely that the individuals adhere to traditional cultural norms, the more likely they are to experience stress when the norms are unmet (Cox).

Finally, culture was found to have an effect on the use of formal services. An example can be drawn from a study on Korean culture and family caregiving (Sung, 1994). Korean culture emphasizes family harmony in which the older person is incorporated into the entire family dynamics (Sung, 1994). This emphasis on family harmony may result in a caregiver's unwillingness to receive formal services for his or her parent with dementia in order to avoid the fear of the stigmatism related to mental illness (Chee & Levokoff, 2001). Face saving is practised where sensitive personal and family problems are deliberately hidden from the outside world. Adult children fulfil their filial responsibility by providing care to their aging parents at home in order to escape public criticism (Chee & Levokoff). For those who send their parents to institutions, they may risk being stigmatized as non-filial. Therefore, for fear of criticism, children caregivers often avoid turning to institutions or formal organizations for services (Chee & Levokoff).

For minority or powerless communities that have historically experienced discrimination, insufficient services, and indifference, these are contributing factors to a reliance on family care. Absence of trust in institutions and formal services can reinforce what is recognized as "traditional behaviour" (Cox, 1992). In this case, where populations are subjected to discrimination, the role of the family continues to be strong. Hence, discrimination reinforces individuals' reliance on family as a primary source of support (Cox).

Analysis of the literature on culture and caregiving just presented revealed that culture has multiple meanings and manifests itself in various aspects of caregiving. Although research studies have focused mostly on the cultural variations identified through comparing ethnic group differences in caregiving, the caregiving discourse indicates the potential changes and variations in cultural values and beliefs within some ethno-cultural communities (Delgado & Tennstedt, 1997).

Effects of Culture on Caregiving: The Case of Chinese Canadians

To demonstrate the effects of culture and its intra-group variations on family caregiving, I used the Chinese-Canadian community as an example. There are several reasons for focusing on the Chinese community. With a total population of over one million, the Chinese are by far the largest single visible minority group in Canada, followed by South Asians and Filipinos. In fact, Chinese Canadians accounted for 25.8 per cent of all visible minorities (Statistics Canada, 2003). In addition to being the largest visible minority population in overall size, the proportion of elderly among Chinese Canadians is greater than other visible minority groups. In 2001, 9.9 per cent of the Chinese Canadians were 65 years and older – a 12.5 per cent increase from 8.8 per cent in 1996. Aside from the significant size of the Chinese-Canadian elderly population, the cultural uniqueness, particularly in health and cultural beliefs, suggests that health and human service professionals should have adequate knowledge to serve better this growing subpopulation. This is particularly the case for many older Chinese, who usually maintain traditional Chinese cultural values and beliefs that may influence their caregiving arrangements and experiences.

Traditionally, family is the predominant mode of support in the Chinese community (Chi, 1999). Under the influence of Confucian values, filial piety is highly valued in the Chinese and many other Asian cultures. Filial piety is an attitude, value, and behavioural prescription for how children should interact with their parents. Its core ideal is for the younger generation to fulfil their obligations to the older generation and family ancestors through multiple behavioural norms associated with care and support for parents, harmonizing family relations, maintaining family continuity, serving community elders, and worshipping ancestors. Translating this principle into practice means that children must ensure that parents are well cared for in old age (Sung, 2002). In practice, filial piety consists of three levels: (1) providing parents with the necessary materials for the satisfaction of their physical needs and comforts, including attending to them when they are ill; (2) paying attention to parents' wishes and obeying their preferences; and (3) behaving in a way that makes parents happy and brings them honour and respect in the community (Chow, 2001). As indicated in the literature reviewed above, filial piety has been reported as the motivating force and value supporting family caregiving for many Asian cultures. If filial piety is a significant cultural trait of these ethnic minority communities, examining its

impact on the caregiving burden is an important component for understanding the cultural context of caregiving. Most importantly, while previous research studies have focused mainly on inter-group differences, few have taken into consideration the intra-group diversity within an ethnic group. No specific study has examined the intra-group variation in filial piety within an ethnic group and the effect of such variation on the family caregiving burden of Chinese family caregivers. In addition, no published research has examined predictors of caregiving burden or the effects of culture on the caregiving burden for caregivers of the elderly of this largest visible minority group in Canada. These were the additional driving forces for this present study in which I examined the effects of intra-group differences on the caregiving burden reported by Chinese family caregivers. In addition to values and beliefs, other culturally diverse aspects of Chinese caregivers should be considered. These aspects are manifested through one's immigration status, length of residence in Canada, language, and religion.

Methodology

Data Collection and Sampling

To demonstrate the effects of culture on family caregiving, I used the data from a cross-sectional telephone survey that I conducted between February and April 2003. The survey interviewed a random sample of 339 Chinese caregivers of Chinese elderly family members in Calgary. The sample was obtained through the following process. First, Chinese surnames and the listed telephone numbers were identified from the local telephone directory to form the sampling frame. Each of the identified telephone listings was assigned a serial number. Using the random cases selection function of SPSS V.10, a random sample of serial numbers and their associated telephone numbers was selected. Telephone contact was then made with all the randomly selected telephone numbers to identify eligible participants who identified themselves as Chinese, the age of 18 years and older, and were providing care to an older Chinese adult at least 65 years or older. The types of care could range from assistance with simple tasks to intensive personal care. The elderly person that one cared for could be living or not living with the caregiver.

The use of the telephone directories and Chinese surnames for sample selection is not without limitations. This method excludes caregivers who do not own a telephone, Chinese caregivers not using Chinese surnames, and caregivers who have

unlisted telephone numbers. However, there is also strong support for using ethnic surnames for locating Chinese and other Asian research participants (Abrahamse, Morrison, & Bolton, 1994; Choi, Hanley, Holowaty, & Dale, 1993; Himmelfarb, Loar, & Mott, 1983; Lauderdale & Kestenbaum, 2000; Quan et al., 2006; Rosenwaike, 1994; Tjam, 2001). Through screening the telephone directory, 22,891 telephone numbers listed with a Chinese surname were identified to form the sampling frame. These numbers represented a total of 725 different Chinese surnames. From this sampling frame, 3,545 telephone numbers – about 15 per cent of the identified telephone numbers in the sampling frame – were randomly selected. Of all the 3,545 telephone numbers contacted, 1,481 Chinese households were identified, while the remaining 2,064 telephone numbers were non-Chinese households ($n = 935$) or unable to be connected with or contacted ($n = 546$) because no one answered, answering machines responded, the number was non-residential, the number was disconnected, or respondents hung up or refused to talk without giving a reason. Among the 1,481 Chinese households identified, of which 396 individuals were eligible and selected for the study, 339 completed the telephone survey, representing a response rate of 85.6 per cent. The eligible but non-response cases were mainly the ones who refused to take part in the study, for lack of interest or being too busy.

A telephone survey with a structured questionnaire was used as the research design for this study. The feasibility of using telephone surveys with family caregivers was demonstrated in previous national studies (Cranswick, 2002; Decima Research, 2002), as well as smaller scale studies with Chinese family caregivers (Mitchell, 2003; Tsang, Chan, Chung, Lam, & Ting, 2005). The high response rate reported for this study further demonstrated the feasibility of this data collection method for Chinese family caregivers. The questionnaire consisted of questions related to the caregiving situation of the caregivers, such as demographic information of the caregivers and the care receivers, health status of the care receivers, type and level of caring tasks provided by the family caregivers, and caregiving burden. It was administered by trained bilingual or multi-lingual interviewers in languages or dialects that included Cantonese, Mandarin, Toishanese, or English, according to the language preference of the participants.

Measures

Caregiving burden was the dependent variable and was measured by a Chinese version of the Zarit

Burden Interview (ZBI) (Chan, 2002). This Chinese version is a translated version of the 22-item Zarit Burden Interview (Zarit, Reever, & Bach-Peterson, 1980). Similar to the English version, the instrument covers areas including caregiver's health, psychological well-being, social life, finances, and relationship between the caregiver and care receiver. The caregiver was asked to indicate the impact of the care receiver's condition on his or her life by specifying how often he or she has felt the way described by each item. Each of the items is answered on a 5-point scale with 0 for never, 1 for rarely, 2 for sometimes, 3 for quite frequently, and 4 for always. The total score of all the items ranges from 0 to 88, with higher scores implying greater perceived caregiver burden. The Chinese version, ZBI (Chan), was first translated into English by an independent bilingual university graduate, modified, and translated back to ensure that the meanings in the scale were consistent with the original English version. The scale was further examined for its reliability and concurrent validity. When used with Chinese caregivers in Hong Kong, the scale reported high inter-rater reliability with an intra-class correlation coefficient of 0.99 and a high split half correlation coefficient of 0.81. The Chinese ZBI scores were also significantly correlated with scores obtained in the General Health Questionnaire (GHQ) with a correlation coefficient of 0.59 ($p < 0.01$) (Chan). For the Chinese family caregivers in this study, a Cronbach's alpha of 0.90 was reported.

In this study, cultural diversity of the Chinese family caregivers was demonstrated through a list of culture-related variables including filial piety, which reflects one's values and beliefs about obligations of caring for the elderly, religion, immigrant status in Canada, and self-rated English competence, which reflects one's acculturation and identification level with Chinese or mainstream culture in Canada. Filial piety was measured by six questions used in the study by Gallois et al. (1996) to assess participant views on how they felt about obligations toward elderly parents. A similar Chinese version was adapted for use in another study of Chinese caregivers in New Zealand (Liu, Ng, Weatherall, & Loong, 2000). In the scale, the participants were asked how much (along a scale of 1 to 5) one would disagree or agree with the obligation to look after, to assist, to respect, to obey, to please, and to maintain contact with elderly parents. The scores for the six items were summed to form the total score, which ranged between 6 and 30, with a higher score indicating a higher level of identification with filial piety concepts. A Cronbach's alpha of .68 was reported for the participants in this study.

Religion of the caregivers was grouped into having no religion, having a Western religion, such as being a Catholic or Christian, and having a non-Western religion such as Buddhism, Taoism, or ancestor worship. Immigrant status was grouped into being Canadian born or being an immigrant. English competence was measured by a question asking the caregivers to rate their own English-language capacity along a 5-point scale ranging from poor (1) to very good (5).

Other confounding variables examined in this study are demographic variables of the caregiver, including age, sex, marital status, education, personal monthly income, self-rated financial adequacy, and being the primary caregiver; and demographic variables of the care receiver including age, sex, and marital status. Age of the caregivers was grouped into seven categories ranging from 18 to 24 years old to 75 years and older. Age of the care receivers referred to their actual age. Sex of both the caregivers and care receivers was grouped into men and women. Marital status of both the caregivers and care receivers was grouped as single or married. The education level of the caregivers and care receivers was divided into four groups, ranging from no formal education to post-secondary education and above. Personal monthly income of the caregivers was grouped into three groups: no income, \$1 to \$1,999, and \$2,000 and above. Self-rated financial adequacy of the caregivers was measured by asking the participants to rate how well their current financial status satisfied their needs on a 4-point scale ranging from very inadequate (1) to very well (4). Participants were also asked to identify whether or not they considered themselves as the primary caregiver shouldering the major caregiving roles and responsibilities, with the answers binary coded as yes (1) or no (0).

Previous research findings have consistently indicated that health problems of the care receivers and caring tasks contribute to a higher level of caregiving burden (Cullen, Grayson, & Jorm, 1997). In this study, the health of the care receivers was represented by the number of illnesses or health problems. It was measured by asking the caregivers to report either yes (1) or no (0) to a list of 14 health problems. Participants were also allowed to add additional health problems to the "others" category. A higher score represented more health problems that the care receivers were having. To represent caring tasks, the level of assistance the caregivers provided to the care receivers in a range of Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) were also measured. Examples of the ADLs and IADLs included dressing, grooming, toileting, bathing, ambulating (i.e., walking, climbing stairs),

transferring (i.e., chair to bed, chair to toilet), eating, administering medication, preparing meals, housework, using a telephone, shopping (i.e., grocery shopping), managing money (i.e., banking and financial management), using transportation (i.e., to and from physician's office), and interpreting and translating. Participants were asked to indicate the level of assistance provided to their elderly relative on each of the activities. Responses ranged from none (0) to a lot (3). The responses were summed to form the ADLs and IADLs scores. The final scores were averaged by the total items measured and resulted in a score that ranged between 0 and 3, with a higher score representing a higher level of assistance provided to the care receivers by the caregivers in these two major types of daily living activities. For the participants in this study, a Cronbach's alpha of .89 and .85 was reported for the ADLs and IADLs respectively.

Data Analysis

Descriptive statistics were used to examine the demographic variables of the caregivers. Zero-order correlation coefficients were used to examine the association between the study variables. To examine the predicting effects of culture-related variables on caregiving burden when controlling for other confounding factors and the contribution of the culture-related factors in explaining the proportion of variance in caregiving burden, hierarchical multiple regression was conducted, with socio-demographic variables of the caregivers entered in the regression, followed by socio-demographic variables of care receivers, health and caregiving task variables, and finally culture-related variables.

Results

Demographics of the Caregivers and Care Receivers

The demographic information was analyzed using descriptive statistics including frequency distribution and means as shown in Table 1. All the caregivers identified themselves as ethnic Chinese. The interviews were conducted mainly in Cantonese (77%), followed by Mandarin (8.8%), English (8.8%), Toishanese (5%), and other Chinese dialects (0.3%). Most (94.0%) of the Chinese caregivers in this study were first generation immigrants and only 5.7 per cent reported being born in Canada. The mean length of residency in Canada for the immigrants was 18.39 years (SD = 10.07, range: 3 to 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 such as Chiu Chow, Fujianese, Shanghaiese, and Vietnamese (2.4%).

Table 1: Descriptive statistics of the study variables

Variable	Mean (SD)	Percentage
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 years & 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 Financial Adequacy	2.8 (0.5)	
(range: 1–4)		
CG Being a Primary Caregiver		67.8
CR Age	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	3.0 (2.1)	
(range: 0–14)		
CR ADL Caring Tasks (range: 0–3)	0.1 (0.4)	
CR IADL Caring Tasks (range: 0–3)	0.9 (0.8)	
CG Immigrant Status		92.9
CG Religion		
No religion		50.1
Western religion		32.2
Non-Western religion		17.7
CG English Competence	3.3 (1.2)	
(range: 0–5)		
CG Filial Piety (range: 6–30)	27.2 (3.2)	
CG Burden (range: 0–88)	13.3 (12.5)	

CG = caregiver, CR = care receiver

Most (65.5%) of the caregivers were females. Over half (54.7%) of the caregivers were between 35 years and 54 years of age, about one in five (19.2%) was 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 per cent, daughters-in-law for 11.8 per cent, wives for 13.3 per cent, husbands for 5.3 per cent, and

sons-in-law for 4.1 per cent. Over three-quarters (77.8%) of the caregivers interviewed were married, 17.4 per cent were never married, and 2.7 per cent were 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 per cent, followed by elementary level (11.0%), and no formal education (3.0%). However, close to two-thirds (63.1%) of the caregivers reported a personal monthly income of not more than \$2,000. Among the participants, 67.8 per cent 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. The average age of the person that the caregiver was caring for was 74.6 years old.

Table 2 presents the correlation coefficients among the study variables. The findings indicate that 11 out of 19 variables are significantly related to caregiving burden. Specifically, a higher level of caregiving burden is significantly associated with caregivers with a lower education level, lower income level, lower level of English competence, worse financial adequacy, being a primary caregiver, having a Western religion, being an immigrant, providing higher levels of assistance in ADLs and IADLs tasks, and care receivers being older in age and having more illnesses or health problems.

Table 3 presents the findings of the hierarchical multiple regression analysis. The results indicate that when the socio-demographic variables of the caregivers are initially entered in the first regression model, lower level of self-rated financial adequacy and being a primary caregiver are significant in predicting higher level of caregiving burden. The demographic variables of the caregivers accounted for 14.2 per cent of the variance in caregiving burden. After adding the demographic variables of care receivers as the second block of predictors, caregivers being a primary caregiver, being younger in age, and having a lower level of self-rated financial adequacy are significant in predicting a higher level of caregiving burden. Caring for receivers of an older age is the only significant predictor added to this second regression model for predicting higher caregiving burden, adding 6.3 per cent of the variance in caregiving burden. When the health status of care receivers is added to the third regression model, only self-rated financial adequacy of the caregivers remains a significant predictor among the variables tested in the previous two models. All the newly added health variables are significant.

Table 2: Correlation matrix of study variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. CG Age	1.00																			
2. CG Gender	0.01	1.00																		
3. CG Marital Status	0.36 ^b	-0.16 ^b	1.00																	
4. CG Education	-0.40 ^b	0.05	-0.10	1.00																
5. CG Income	-0.10	0.25 ^b	-0.09	0.26 ^b	1.00															
6. CG Financial Adequacy	-0.11 ^a	0.03	-0.06	0.30 ^b	0.32 ^b	1.00														
7. CG Primary Caregiver	0.31 ^b	-0.07	0.17 ^a	-0.03	-0.04	-0.03	1.00													
8. CR Age	0.23 ^b	-0.10	-0.04	-0.21 ^b	-0.13 ^a	-0.06	0.06	1.00												
9. CR Gender	0.05	-0.14 ^a	0.06	-0.00	0.01	0.13 ^a	0.19 ^b	-0.09	1.00											
10. CR Marital Status	0.13 ^a	0.01	0.11 ^a	0.03	0.09	0.08	0.10	-0.33 ^b	0.48 ^b	1.00										
11. CR Number of Illnesses	0.06	-0.08	-0.00	-0.19 ^a	-0.11 ^a	-0.14 ^a	0.02	0.32 ^b	-0.16 ^a	-0.11	1.00									
12. CR ADL Caring Tasks	0.07	0.03	0.07	0.02	0.03	-0.04	0.10	0.18 ^a	-0.10	-0.08	0.25 ^b	1.00								
13. CR IADL Caring Tasks	0.05	0.01	0.09	-0.15 ^a	-0.03	-0.22 ^b	0.09	0.27 ^b	-0.23 ^b	-0.20 ^b	0.45 ^b	0.47 ^b	1.00							
14. CG Immigrant Status	0.19 ^b	-0.11 ^a	0.12 ^a	-0.13 ^a	-0.11	-0.15 ^a	0.08	0.08	-0.02	-0.07	0.04	-0.07	0.11 ^a	1.00						
15. CG Western Religion	-0.00	-0.04	-0.02	0.20 ^b	0.08	0.09	-0.01	0.02	-0.05	0.03	0.09	0.06	-0.03	-0.01	1.00					
16. CG Non-Western Religion	0.15 ^a	0.04	0.06	-0.27 ^b	-0.03	-0.08	0.05	0.15 ^a	-0.03	-0.02	-0.01	0.02	0.09	0.01	-0.32 ^b	1.00				
17. CG English Competence	-0.43 ^b	0.14 ^a	-0.21 ^b	0.67 ^b	0.24 ^b	0.36 ^b	-0.09	-0.18 ^a	0.02	-0.03	-0.17 ^a	-0.02	-0.20 ^b	-0.28 ^b	0.20 ^b	-0.17 ^a	1.00			
18. CG Filial Piety	0.03	0.04	0.03	-0.13 ^a	-0.02	-0.01	0.10	0.04	-0.04	-0.05	0.09	0.03	0.08	0.08	-0.04	0.09	-0.05	1.00		
19. CG Burden	0.03	-0.05	0.08	-0.11 ^a	-0.15 ^a	-0.35 ^b	0.13 ^a	0.24 ^b	-0.10	-0.08	0.45 ^b	0.41 ^b	0.51 ^b	0.14 ^a	0.15 ^a	0.07	-0.17 ^a	-0.04	1.00	

CG = caregiver; CR = care receiver; ^a p < 0.05; ^b p < 0.01

Table 3: Multiple regression analysis of predictors for caregivers' burden

		Standardized Coefficients			
		Model 1	Model 2	Model 3	Model 4
Demographic Variables of CG	CG age	-0.08	-0.15*	-0.09	-0.13*
	CG gender ^a – male	-0.01	0.01	0.01	0.03
	CG being married ^b	0.05	0.09	0.04	0.04
	CG education (range: 1–4)	-0.03	-0.00	0.04	0.02
	CG personal monthly income (range: 1–3)	-0.04	-0.02	-0.05	-0.06
	CG financial adequacy (range: 1–4)	-0.33***	-0.32***	-0.25***	-0.24***
	CG primary caregiver ^c	0.14*	0.15**	0.09	0.08
Demographic Variables of CR	CR age	–	0.27***	0.09	0.07
	CR gender ^d – male	–	-0.10	0.02	0.03
	CR being married ^e	–	0.08	0.06	0.05
Health Status Variables	CR number of illnesses (range: 0–14)	–	–	0.24***	0.23***
	ADL caring tasks (range: 0–3)	–	–	0.21***	0.22***
	IADL caring tasks (range: 0–3)	–	–	0.24***	0.24***
Cultural Variables	CG as an immigrant ^f	–	–	–	0.10*
	CG religion ^g				
	Western religion	–	–	–	0.18***
	non-Western religion	–	–	–	0.09*
	CG English competence (range: 1–5)	–	–	–	-0.01
	CG filial piety (range: 6–30)	–	–	–	-0.09*
	R ² change	0.142***	0.063***	0.228***	0.045***
	Total R ²	0.142	0.205	0.433	0.478
Adjusted R ²	0.124	0.181	0.410	0.448	

CG = caregivers, CR = care receivers; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Reference groups: ^afemale (CG), ^bsingle (CG), ^cnot primary caregivers (CG), ^dfemale (CR), ^esingle (CR), ^fnot being immigrant (CR), ^ghaving a religion (CG)

– variables not entered

Care receivers having more illnesses or health problems and caregivers providing more assistance in ADLs and IADLs tasks are significant in predicting a higher level of caregiving burden. Adding the health variables resulted in explaining an additional 22.8 per cent of the variance in caregiving burden.

In the final model, the cultural variables are added. The predicting effect of caregivers' age, self-rated financial adequacy, and health variables remained significant. Three of the four cultural variables, including immigration status, religion, and filial piety, are the predictors added to this final model. Being an immigrant, having a Western and non-Western religion as compared to having no religion, and having a lower level of filial piety are the significant cultural variables added to the model. As a block, the cultural variables accounted for an additional 4.5 per cent of the variance in caregiving burden. All the predictors explained a total of 44.8 per cent of the variance in caregiving burden.

Discussion

This study aimed at examining the effects of culture, as manifested through cultural variables, on the caregiving burden of family caregivers in a Chinese-Canadian community. Comparing the burden of the Chinese family caregivers with caregivers from other ethnic or cultural groups was not within the scope of this study. However, in addition to examining the predictors of caregiving burden of the Chinese-Canadian family caregivers, this study took a further step to examine the effects of intra-group cultural variations on caregiving burden of the family caregivers within the largest visible minority group in Canada. Despite the fact that the Chinese tradition is well known for its emphasis on providing care to elders, the family caregivers are not exempt from being burdened. The findings point specifically to the socio-cultural variations in caregiving burden within this ethnic minority community.

Consistent with findings in previous studies on caregiving, health of the care receivers and amount of care or assistance requiring the caregivers to

provide are significant in predicting caregiving burden of the Chinese family caregivers. What it implies is that despite the filial piety values and beliefs held by the Chinese caregivers, they do, as other caregivers do, report challenges and feel the burden. The findings have further verified the universal effect of health variables on caregiving. Previous findings reviewed earlier in this paper support the fact that providing assistance in health-related tasks is not just time-consuming and stressful, but also physically burdensome for family caregivers. The physical burden resulting from having to provide personal care in activities of daily living further adds to the emotional burden of caregivers.

Financial status is significant in predicting caregiving burden. The standardized coefficient of self-rated financial adequacy was similar to the one reported for the health-related variables. The reason for caregivers with poorer financial status reporting a higher level of burden is understandable, since caregiving can be financially draining for many caregivers. This is supported by research findings on the financial and economic consequences of caregiving (Hayman et al., 2001). The findings from the survey commissioned by Health Canada on Canadian family caregivers (Decima Research, 2002) also indicated that caregiving affects finances in ways other than employment. Forty-four per cent of caregivers reported having paid for expenses as a result of providing care to their family members. Caregivers were most likely to report having to spend their own money on transportation (e.g., gas, taxi, public transit) and non-prescription medications, while a smaller proportion reported that they paid for medical supplies, prescription medications, equipment, and homemaking supplies (e.g., housekeeping, meals). All of these add to the financial pressure as well as the caregiving burden of the caregivers.

In addition to financial status, age of the caregivers was also significant in predicting caregiving burden. This can be explained by the competing demands and expectations facing the family caregivers who are younger. Many caregivers, particularly the ones in the middle-age groups, may be in multiple roles with challenges and demands for them at work, their own families, and child care, while providing care to elderly family members at the same time.

Despite the fact that Chinese family caregivers are eager to provide care as a result of cultural, social, and familial obligations and responsibilities, they are challenged by their caregiving burdens. The focus of this study is on culture and caregiving burden. Although the cultural variables accounted for the smallest proportion of variance in caregiving burden,

and the standardized coefficients reported for the cultural variables were relatively smaller than the ones reported for the other significant socio-demographic and health-related predictors, three variables were identified as significant in predicting caregiving burden of Chinese family caregivers: immigration status, religion, and filial piety.

Filial piety has been a key traditional value for many people from the Chinese culture. This study indicated that filial piety was a significant predictor for lower levels of caregiving burden, when controlling for the effects of other confounding factors. It appears that, as an important cultural trait, filial piety is a protective factor against the level of caregiving burden experienced by the Chinese caregivers in this study. It means that those who identify more with filial piety are having an easier journey, at least subjectively, in providing care for their elderly family members. Filial piety may provide caregivers with the psychological strengths and endurance required to deal with the challenges and negative effects of caregiving. Of course, the specific mechanisms of this potential buffering effect should be further examined in future studies.

On the other hand, the findings in this study indicated that the protective effect of cultural values and beliefs, as measured by filial piety, was not as strong as competing cultural predictors. When controlled for filial piety and other confounding factors, being an immigrant was the most important cultural variable predicting caregiving burden, with the highest standardized coefficient when compared with other cultural variables. This can be explained by the disadvantaged socio-economic status and cultural barriers that immigrants often report. Previous research on immigrants consistently indicated the adjustment challenges, access barriers, and mental and physical health concerns (Wong & Tsang, 2004). Therefore, for Chinese family caregivers who are immigrants to Canada, many continue to struggle with the difficulties associated with adjusting to new country, finding employment, and financial challenges. All these challenges result in a double jeopardy facing caregivers who are also immigrants, adding another layer of complications and burdens to those who have to provide care to elderly relatives at home.

When compared with not having a religion, having a religion, whether Western or non-Western, predicted a higher level of caregiving burden. It is commonly believed that religious affiliation is associated with higher levels of spiritual, emotional, or even social support, thus resulting in a distress deterrent function (Levin & Markides, 1986). However, this study found

that having a religion did not correspond with a reduction in caregiving burden. On the contrary, having a religion, either Western or non-Western, predicted a higher level of caregiving burden.

The association between religion and caregiving burden of the Chinese family caregivers can be understood from three different perspectives. First, family caregivers who are already burdened by caregiving responsibilities may have used religion as a way of coping or providing them with the spiritual, emotional, and social support and resources they need. Therefore, people with a religion are actually the ones who have an initially higher level of burden, which in turn acts as the reason for one to take up a religion – a hypothesis that should be further examined in future research.

Another perspective for understanding the predicting effects of having a religion on caregiving burden is related to the potential sense of guilt that many family caregivers may have. Research findings have identified the direct relationship between extrinsic religiosity and greater levels of depression (Rosik, 1989), and the negative exacerbation effects of religiosity on family stressors (Mitchell, Mathews, & Yesavage, 1993). Some researchers also argue that when people's religion emphasizes family stability, they may be especially distressed by family problems (Strawbridge, Shema, Cohen, Roberts, & Kaplan, 1998). These explanations may better fit the situation for the family caregivers having a Western religion.

The third perspective on religion and caregiving burden is about Chinese family caregivers reporting a non-Western religion. The family caregivers who have a non-Western religion are probably the ones who are more "traditional", with stronger affiliation with Chinese culture, values, and beliefs. In Canada, where most of the community support and health services are delivered under the assumption of Western societal values and concepts, the challenges facing the "traditional" Chinese family caregivers can be severe, particularly when their world view may be very much different from the one of the mainstream. Therefore, it is not surprising to see these family caregivers reporting a higher level of burden when compared with the ones without a specific religion.

What are the implications of all these predictors to policies and practices? One should be cautious. Even for those who have a strong sense of filial piety, although they may not feel as burdened as others, it does not necessarily mean that providing care is a light task. The reason is that the beliefs and values of filial piety may actually prevent caregivers from using appropriate services that support their caregiving tasks. The feeling of shame about using external help

and the cultural values of respect for and duty to older adults (filial piety) may hinder caregivers from seeking outside support and interventions even when needed (Dilworth-Anderson & Gibson, 2002).

In order to maintain the informal support and caring system for the aging population, reliance solely upon filial piety is inadequate. As indicated by many researchers (Chow, 2001; Delgado & Tennstedt, 1997), the attitude toward and manifestations of filial obligation have been changing. Structural circumstances such as family structure, living environment, housing, employment, and economy seldom allow traditional filial piety to be nurtured. The predicting effect of immigration status on caregiving burden has demonstrated that the protective power of filial piety could also be levelled out by the immigration status of the caregivers. This is a good example for demonstrating the competing challenges faced by this group of ethnic minority family caregivers.

Policy makers should consider the limitations and challenges faced by individual family caregivers and should not take filial piety or obligations for granted. Without adequate support and tangible resources, the goodwill of the family caregivers will eventually burn out. Culturally appropriate support services should be provided and delivered to family caregivers, taking into consideration the cultural values and beliefs that they have toward using the formal services.

Finally, the limitations of this study should be noted. First, although a random sample was used, the participants were all from the same city. The local nature of the sample limits the capacity of the results to be generalized to other Chinese-Canadian caregivers in other locations. Second, the majority of the Chinese caregivers that took part in this study were immigrants. The ability of the findings to represent the situation of Canadian-born Chinese caregivers is questionable. Third, the use of telephone screening to identify participants includes only caregivers who were available when the screening took place. Caregivers who were not able to answer the telephone because of busy caregiving responsibilities might have been excluded. Fourth, the use of a self-reporting method to measure the health status of the care receivers and the caregiving tasks of the caregivers might have created validity and reliability problems. Finally, the cross-sectional survey design used did not allow for establishment of causal relationships between the predicting variables that were studied. Therefore future studies should consider using a larger representative sample from more communities, inclusion of comparison samples of Chinese non-caregivers and Canadian-born Chinese caregivers,

and adoption of a longitudinal design further to substantiate the causal relationships among the study variables.

References

- Abrahamse, A.F., Morrison, P.A., & Bolton, N.M. (1994). Surname analysis for estimating local concentration of Hispanics and Asians. *Population Research and Policy Review, 13*, 383–398.
- Abramson, T.A., Trejo, L., & Lai, D.W.L. (2002). Culture and mental health: Providing appropriate services for a diverse older population. *Generations, 24*(1), 21–27.
- Biegel, D.E., Sales, E., & Schulz, R. (1991). *Family caregiving in chronic illness: Alzheimer's disease, cancer, heart disease, mental illness, and stroke*. Newbury Park, CA: Sage.
- Burnette, D., & Mui, A.C. (1995). In-home and community-based service utilization by three groups of elderly Hispanics: A national perspective. *Social Work Research, 19*, 197–205.
- Chan, S.F. (2002, October). *Validation of the Chinese version of Zarit Burden Interview*. Poster session presented at the International Psychogeriatric Association Asia Pacific Regional Meeting, Hong Kong, People's Republic of China.
- Chappell, N.L., & Penning, M. (1996). Behavioural problems and distress among caregivers of people with dementia. *Ageing and Society, 16*, 57–73.
- Chee, Y.K., & Levkoff, S.E. (2001). Culture and dementia: Accounts by family caregivers and health professionals for dementia-affected elders in South Korea. *Journal of Cross-Cultural Gerontology, 16*(2), 111–125.
- Chi, I. (1999). China and the family unit: Implications for employed caregivers. In V.M. Lechner, & M.B. Neal (Eds.), *Work with caring for the elderly: International perspective* (pp. 177–193). Philadelphia: Brunner/Mazel.
- Choi, B.C.K., Hanley, A.J.G., Holowaty, E.J., & Dale, D. (1993). Use of surnames to identify individuals of Chinese ancestry. *American Journal of Epidemiology, 138*(9), 723–734.
- Chow, N.W.S. (2001). The practice of filial piety among the Chinese in Hong Kong. In I. Chi, N.L. Chappell, & J. Lubben (Eds.), *Elderly Chinese in Pacific Rim countries*. Hong Kong: Hong Kong University.
- Cox, C. (1992). Culture and dementia: Effects on care-givers and implications for services. In B.M.L. Miesen., & G.M.M. Jones (Eds.), *Caregiving in dementia in research and applications: Vol. 2* (pp. 37–47). London: Routledge.
- Cox, C. (1995). Comparing the experiences of black and white caregivers of dementia patients. *National Association of Social Workers, 40*(3), 343–349.
- Cranswick, K. (2002). General Social Survey Cycle 16: Caring for an aging society. Retrieved 14 July 2006 from <http://www.statcan.ca:8096/bsolc/english/bsolc?catno=89-582-x>.
- Cullen, J.S., Grayson, D.A., & Jorm, A.F. (1997). Clinical diagnoses and disability of cognitively impaired older persons as predictors of stress in their carers. *International Journal of Geriatric Psychiatry, 12*(10), 1019–1028.
- Decima Research. (2002). *National profile of family caregivers in Canada – 2002*. Final report. Ottawa: Health Canada. Retrieved 14 July 2006 from http://www.hc-sc.gc.ca/english/pdf/care/nat_profile02.pdf.
- Delgado, M., & Tennstedt, S. (1997). Puerto Rican sons as primary caregivers of elder parents. *Social Work, 42*, 125–134.
- Dilworth-Anderson, P., & Gibson, B.E. (2002). Cultural influence of values, norms, meanings, and perceptions in understanding dementia in ethnic minorities. *Alzheimer Disease and Associated Disorders, 16* (Suppl. 2), S56–S63.
- Fung, K.K. (1998). Origin and development of Chinese cultures. *Understanding Chinese Cultures: A handbook for health care and rehabilitation professionals* (pp. 16–42). Toronto: Yee Hong Centre for Geriatric Care.
- Gallois, C., Giles, H., Ota, H., Pierson, H.D., Ng, S.H., Lim, T.S., Maher, J., Somera, L., Ryan, E.B., & Harwood, J. (1996, August). *Intergenerational communication across the Pacific Rim: The impact of filial piety*. Paper presented at the annual conference of the International Association of Cross-Cultural Psychology, Montreal.
- Gangrade, K.D. (1999). Emerging conceptions of aging in India. *Eastern Anthropologist, 49*(2), 151–170.
- Gibeau, J.L., & Anastas, J.W. (1989). Breadwinners and caregivers: Interviews with working women. *Journal of Gerontological Social Work, 14*, 19–20.
- Goodman, C.C. (1990). Caregiving roles of Asian-American women. *Journal of Women and Aging, 2*(1), 109–120.
- Grunfeld, E. (1997). Caring for elderly people at home: The consequences to caregivers. *Canadian Medical Association Journal, 157*(8), 1101–1105.
- Gupta, R., & Pillai, V.K. (2002). Elder care giving in South Asian families: Implications for social service. *Journal of Comparative Family Studies, 33*(4), 565–576.
- Hayman, J.A., Langa, K.M., Kabeto, M.U., Katz, S.J., DeMonner, S.M., Chernew, M.E., Slavin, M.B., & Fendrick, A.M. (2001). Estimating the cost of informal caregiving for elderly patients with cancer. *Journal of Clinical Oncology, 19*(13), 3219–3225.
- Himmelfarb, H.S., Loar, R.M., & Mott, S.H. (1983). Sampling by ethnic surnames: The case of American Jews. *Public Opinion Quarterly, 47*, 247–260.

- Hishimoto, A. (1996). *The gift of generations: Japanese and American perspectives on ageing and the social contract*. Cambridge: Cambridge University Press.
- Holroyd, E. (2001). Hong Kong Chinese daughters' intergenerational caregiving obligations: A cultural approach. *Social Science and Medicine*, 53(9), 1125–1134.
- Holroyd, E. (2002). Health-seeking behaviours and social change: The experience of the Hong Kong Chinese elderly. *Qualitative Health Research*, 12(6), 731–750.
- Jones, P.S. (1995). Paying respect: Care of elderly parents by Chinese and Filipino American women. *Health Care for Women International*, 16(5), 385–398.
- Kim, J., & Lee, E. (2003). Cultural and noncultural predictors of health outcomes in Korean daughter and daughter-in-law caregivers. *Public Health Nursing*, 20(2), 111–119.
- Lauderdale, D.S., & Kestenbaum, B. (2000). Asian-American ethnic identification by surname. *Population Research and Policy Review*, 19, 283–300.
- Lee, E.E., & Farran, C.J. (2004). Depression among Korean, Korean-American, and Caucasian-American family caregivers. *Journal of Transcultural Nursing*, 15(1), 18–25.
- Lee, Y. (1995). Korean and North American Caucasian caregivers of dementia patients: A cross-cultural comparison of caregiver burden. Unpublished dissertation, University of Texas, TX.
- Levin, J., & Markides, K. (1986). Religious attendance and subjective health. *Journal for the Scientific Study of Religion*, 25(1), 31–41.
- Liu, J.H., Ng, S.H., Weatherall, A., & Loong, C. (2000). Filial piety, acculturation, and intergeneration communication among New Zealand Chinese. *Basic & Applied Social Psychology*, 22(3), 213–223.
- Lockery, S.A. (1991). Family and social supports: Caregiving among racial and ethnic minority elders. *Generations*, 15(4), 58–62.
- Markides, K.S., & Mindel, C.H. (1987). *Aging and ethnicity*. Beverly Hills: Sage.
- Mitchell, B.A. (2003). Would I share a home with an elderly parent? Exploring ethnocultural diversity and intergenerational support relations during young adulthood. *Canadian Journal on Aging*, 22(1), 69–82.
- Mitchell, J., Mathews, H.F., & Yesavage, J.A. (1993). A multidimensional examination of depression among the elderly. *Research on Aging*, 15(2), 198–219.
- Neal, M.B., Chapman, N.J., & Ingersoll-Dayton, B. (1988). *Elder care, employees, and the workplace: Findings from a survey of employees*. Portland, OR: Regional Research Institute for Human Services and Institute on Aging, Portland State University.
- Nishi, S.M. (1995). Chinese Americans. In P.G. Min (Ed.), *Asian Americans: Contemporary trends and issues* (pp. 65–94). Thousand Oaks, CA: Sage.
- Quan, H., Wang, F., Schopflocher, D., Norris, C., Galbraith, P.D., Faris, P., Graham, M.M., Knudtson, M.L., & Ghali, W.A. (2006). Development and validation of a surname list to define Chinese ethnicity. *Medical Care*, 44(4), 328–333.
- Rosenwaike, I. (1994). Surname analysis as a means of estimating minority elderly: An application using Asian surnames. *Research on Aging*, 16(2), 212–227.
- Rosik, C.H. (1989). The impact of religious orientation in conjugal bereavement among older adults. *International Journal of Aging and Human Development*, 28, 251–245.
- Schulz, R., Mendelsohn, A.B., Haley, W.E., Mahoney, D., Allen, R.S., Zhang, S., Thompson, L., & Belle, S.H. (2003). End-of-life care and effects of bereavement on family caregivers of persons with dementia. *New England Journal of Medicine*, 34(20), 1936–1942.
- Stafford, C. (1995). *The roads of Chinese childhood*. Cambridge: Cambridge University Press.
- Statistics Canada. (2002). *Profile of the Canadian population by age and sex: Canada ages*. Ottawa: Statistics Canada Retrieved 14 July 2006 from <http://www12.statcan.ca/english/census01/Products/Analytic/companion/age/contents.cfm>.
- Statistics Canada. (2003). *Canada*. Ottawa: Statistics Canada Retrieved 14 July 2006 from <http://www12.statcan.ca/english/census01/products/analytic/companion/etoimm/pdf/96F0030XIE2001008.pdf>.
- Strawbridge, W.J., Shema, S.J., Cohen, R.D., Roberts, R.E., & Kaplan, G.A. (1998). Religiosity buffers effects of some stressors on depression but exacerbates others. *Journal of Gerontology: Social Sciences*, 53B, S118–S126.
- Sung, K.T. (1994). South Korea. In J.I. Kosberg (Ed.), *International handbook on services for the elderly* (pp. 456–372). Westport, CT: Greenwood.
- Sung, K.T. (2002). Filial piety: The East Asian ideal of parent care in changing times. *Southwest Journal on Aging*, 19, (1–2), 23–29.
- Tjam, E.Y. (2001). How to find Chinese research participants: Use of a phonologically based surname search method. *Canadian Journal of Public Health*, 92(2), 138–142.
- Tsang, H.W.H., Chan, A.S.M., Chung, A.W.Y., Lam, E.C.F., & Ting, S.O.S. (2005). Reliability of the Chinese version of the perceived family burden scale. *International Journal of Rehabilitation Research*, 28(3), 289–291.
- Walker, A.J., Pratt, C.C., Shin, H.Y., & Jones, L.L. (1990). Motives for parental caregiving and relationship quality. *Family Relations*, 39, 51–56.

Wong, R.Y.L., & Tsang, A.K.T. (2004). When Asian immigrant women speak: From mental health to strategies of being. *American Journal of Orthopsychiatry*, 74(4), 456–466.

Zarit, S.H., Reever, K.E., & Bach-Peterson, J. (1980). Relatives of the impaired elderly: Correlates

of feelings of burden. *Gerontologist*, 20(6), 649–655.

Zhan, H.J., & Montgomery, R.J.V. (2003). Gender and elder care in China: The influence of filial piety and structural constraints. *Gender and Society*, 17(2), 209–229.

CANADIAN
JOURNAL
ON
AGING

LA REVUE
CANADIENNE
DU
VIEILLISSEMENT