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Abstract

Drawing on social productive function and social capital theory, we examine the differential importance of personal and environmental resources to the satisfaction with time use, health, finances, and main activities. Data pertaining to Canadians aged 60 and above (n = 5986) participating in the General Social Survey (Cycle 17) were analyzed. Canadian seniors were most satisfied with their time use and least with their finances. While health limitations and the sense of mastery were important to all four domains, the physical environment and civic activities yielded increasingly idiosyncratic, domain-specific effects. We further explore the significance of our findings using literature pertaining to resilience, the functional specificity of social relationships, and the maximum utility of resources.

Aging is a complex process of adaptation to physical, psychological and social changes (Steverink, Lindenberg and Ormel, 1998). With the higher probability of changing life circumstances in older age, stressors and the need to adapt increase rather than decrease (Borglin, Jakobsson, Edberg and Hallberg, 2006). How well people adapt to the stresses of living depends heavily upon the personal and environmental resources available to them, and is reflected, in part, in how people feel about themselves and their life conditions (Lazarus and Folkman, 1984). Social Production Function theory asserts that resources both internal and external to the individual function as instruments or means to achieving well-being (Steverink, Lindenberg and Slaets, 2005). While individuals are assumed to be resourceful and strive to maximize their well-being, restrictions in resources available in older age constrain optimal well-being (Steverink, Lindenberg and Ormel, 1998). Declining reserve capacities in older age are of concern as they lead to greater vulnerability or frailty, and risk for decline in well-being (Steverink, Lindenberg and Slaets, 2005).

The changing balance between gains and losses in resources in later life can lead to a reliance on idiosyncratic ways of achieving well-being (Steverink, Lindenberg and Ormel, 1998) with older people taking courses of action likely to their enhance well-being by putting resources to use in ways they believe best meet their perceived needs (Steverink, Lindenberg and Slaets, 2005). Cummins' (1996) observations that people who were satisfied with their lives as a whole also experience dissatisfaction in particular areas of their lives, suggest resources impact peoples' lives in different ways. This begs the question of whether some resources in older age overlap or differ in their purposes to optimize life satisfaction. To further explore this question within a Canadian context, a secondary analysis of General Social Survey data on Social Engagement

Cycle 17 (Statistics Canada, 2004) was undertaken to examine whether personal and environmental resources are differentially important in predicting satisfaction across four domains of older Canadians' lives (health, time use, finances and main activity).

Personal resources can be physical in nature and include health and energy (Lazarus and Folkman, 1984). Many Canadians live out their retirement years with chronic illnesses such as cancer, diabetes, lung disease and arthritis, and experience disability and dependence with advancing age (Martel, Belanger, Berthelot and Carriere, 2005). There is evidence suggesting that health-related resources or the lack thereof could significantly affect the satisfaction of health in older age (Michalos and Zumbo, 2002). Similarly, for the satisfaction with both time use and activities in general, physical health impacts upon older peoples' propensity for volunteer (Kloseck, Crilly and Mannell, 2006) and hobby work, (Bukov, Mass and Lampert, 2002) pursuing education, worshipping and the frequency of outings (Litwin and Shiovitz-Ezra, 2006; Menec, 2003). Seniors in poorer health might also be less satisfied with their financial circumstances given the link between income adequacy and self-rated health (Cairney, 2000; Martel, Belanger, Berthelot and Carriere, 2005).

Personal resources also function as cognitions or active-motivational processes furthering the older person's ability to self-manage their resources, cope with loss and remain actively engaged (Steverink, Lindenberg and Slaets, 2005). The sense of control, coherence and self-efficacy have been found to differentiate older people with high and low levels of physical functioning (Bishop, Martin and Poon, 2006; Martel, Belanger, Berthelot and Carriere, 2005), and perceived control to partly mediate the effects of ill health on life satisfaction as a whole (Bourque,

Pushkar, Bonneville and Beland, 2006). Psychological beliefs may then, function as internal resources that help people manage health-related stressors (Pearlin, 1989). Others argue disillusionment with health-related impairments deter social participation in terms of time use and levels of activity in general (Low, Molzahn and Kalfoss, 2008). Seniors with stronger positive cognitions may be those most satisfied with their health, time use and main activities. The structural attributes of the physical environment or housing and neighbourhood needs and options for community participation, and informal attributes such as support provision, become increasingly important resources affecting well-being, particularly when people experience declines in function (Cvitkovich and Wister, 2001). Older people in poorer health are more likely to have negative views of neighbourhood crime and safety, living enjoyment and deprivation, and friendliness (Wiggins, Higgs, Hyde, Martin and Blane, 2004). Access to information about community events, activities of interest and leisure facilities also influences social participation (Low, Molzahn and Kalfoss, 2008). Living in deprived environments in older age is also associated with health and economic disparities (Cairney, 2000). Notably, safe, accessible and familiar living environments could increase the likelihood of being satisfied with one's health and finances; those lacking might constrain time use and main activities.

Social participation in one's community appears to play an important role in generating environmental or external resources. Civic engagement is akin to capacity building through the sharing of information, skills and resources, and mobilizing people within a community in volunteer and leadership roles (Victorino and Gauthier, 2002). Social capital is generated through relationships such as associations with social action or hobby groups and volunteer work having the potential to facilitate information flow, support individual's social credentials and

reinforce identity or recognition (Reimer, Lyons, Ferguson and Polanco, 2008). Volunteer work, as an altruistic behaviour, fosters the sense of community connectedness and belonging (Thurer and Wister, in press) and is more often done out of obligation and social value than self-interest per se (Chappell and Prince, 1997). Volunteer work also enhances physical health and independence (Menec, 2003; Morrow-Howell, Hinterlong, Rozario and Tang, 2003). Older people also define community involvement as a productive and generative activity (Warburton and McLaughlin, 2005). Seemingly, civic engagement is important to health, time use and activity in general. Civic activities also involve exchanges of material resources such as charitable donations and casting political votes (Burr, Caro and Moorhead, 2002). Further evidence implicating stable income and political freedom with life satisfaction as a whole (Haller and Hadler, 2006) suggests social capital relations might function as a kind of stock that can be drawn upon for economic ends (Reimer, Lyons, Ferguson and Polanco, 2008).

Communal relations, marked by intense socialization and shared identities, generate social capital through reciprocal support (Reimer, Lyons, Ferguson and Polanco, 2008), thus potentially impacting time use, health and activity. Close ties within one's social network have been described as sources of meaningful and purposive activity (Low and Molzahn, 2007). Quality support (Bishop, Martin and Poon, 2006), not frequency of contact (Martel, Belanger, Berthelot and Carriere, 2005) within social networks, and having familiar and trusting neighbours (Bowling, Barber, Morris and Ebrahim, 2006) has enhanced seniors' health perceptions. Satisfaction with contact from family, friends and neighbours has also predicted one aspect of subjective well-being - the satisfaction with the personal use of time (Litwin and Shiovitz-Ezra, 2007). Informal care from family, neighbours and friends has been found to increase with health-

related needs and not be displaced by in-home service care (Penning, 2002), nor has informal care from adult children deterred because of paid employment (Rosenthal, Hayward, Martin-Matthews and Denton, 2004; Rosenthal, Martin-Matthews and Keefe, 2007) or minimal monetary compensation (Keefe and Fancey, 1997). Although siblings and spouses most often assist in the provision of direct care, they, as do friends, also offer moral, household and financial support (Sims-Gould and Martin-Matthews, 2007).

Methods

Data Collection

Ethical approval was obtained from the University of Alberta Health Research Ethics Board, Panel B prior to embarking on our secondary analysis of the GSS Cycle 17 public use micro-data file (PUMF). Cycle 17 data captures social trends in the living conditions and well-being of Canadians over time, with social participation as key core content (Statistics Canada, 2004), and was collected between February and December 2003 from all non-institutionalized persons over the age of 15 in all provinces except the Northwest Territories and the Yukon. Each of the ten provinces were geographically stratified and then, separately and randomly sampled for computer-assisted telephone interviews. Data pertaining to all adults aged 60 and over from the GSS Cycle 17, which ended in a total of 5,986, were used in this study.

Study sample

Sample characteristics were weighted to reflect all seniors in the population (Statistics Canada, 2004). Slightly more than half of respondents were female (54.9%). For their highest level of education, 40.4% reported having less than secondary education, 13.1% were secondary

graduates, and 43.5% had a post-secondary or higher level of education. Categories of age were: 60-69 (48.4%), 70-79 (34.6%), and 80+ years of age (16.9%). With respect to marital status, 64.2% were with a partner. Available data on personal income was the proportion reporting an annual income of less than \$15000 (20.3%), \$15000 to 29,999 (18.1%), \$30000 and above (23.9%); slightly more than a third (35.8%) did not report an annual income.

Survey Items

The four domains of life (time use, health, finances and main activity) were coded on a Likert scale ranging from 1-10 with only two categories labelled as 1=very dissatisfied and 10=very satisfied. Respondents with 'no opinion', 'not stated' or 'don't know' were excluded from further analysis as these could, in theory, fall anywhere along the 10-point Likert scale.

Subsequently, each domain was recoded into two categories: those dissatisfied (range = 1-5) and those satisfied (range = 6-10). Data pertaining to personal and environmental resources were housed in modules on health and activity limitations, mastery, dwelling and safety, and social, civic and religious participation, from which the latter three groups of respondents were also excluded.

Perceptions of health limitations were measured using items from the health and activity limitations module, one of which pertained to general health on a 5-point Likert scale recoded into two categories: fair/poor versus good/very good/excellent. Remaining items elicited yes/no responses, asking about difficulty hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing any other similar activity, and on a more contextual level, physical or mental conditions or health problems reducing the amount or kind of activity in their home;

activities outside the home pertaining to work or school; transport, leisure and other activities. Respondents were also asked whether they had trouble going to or staying asleep. For positive beliefs, we used a measure of the sense of mastery (Pearlin and Schooler, 1978) or the 'MASCALE' reflecting the extent to which individuals believed that their life chances were under their control. Scores on this interval level scale spanned from 0 through 30, with higher scores indicating superior mastery.

The physical environment was measured by items from the dwelling and safety modules. Dwelling pertained to number of neighbours known by the respondent (nobody/few versus many/most), whether neighbours were helpful, and duration of residence (less than 1 year versus 1 to 4 years and 5 or more years). Items on beliefs about neighbourhood safety reflected proportions feeling very/reasonably safe versus somewhat/very unsafe/not walking alone after dark, and those, when at home feeling not at all worried versus worried/never alone at night.

Quality of social support was measured using items from the social participation module. Supportive care received reflected the proportion of respondents having none, 1 or 2, and 3 or more relatives and, also friends whom they felt close to, felt at ease with talking about what is on their mind, or could call on for help. Data was available on reciprocal social support, with informal help given measured by the proportion giving help to anyone with domestic work, home maintenance, outdoor work; transport or running errands; teaching, coaching, or giving practical advice; emotional support; and childcare. Informal help received did not include childcare.

Religious support was measured using two items reflecting the proportion of those perceiving their religious and spiritual beliefs as not at all/not very important versus somewhat/very important, and also those who were not attending versus those attending (annually, monthly and weekly inclusively) religious services and meetings. Items on civic activities were taken from the civic participation module. These included proportions being a member of: a union or professional organization; a political party or group; a sports or recreation league or club; cultural, educational, or hobby (theatre, book or bridge) group; a religious affiliated group; a school group, neighbourhood watch, civic or community organization; a service or fraternal club. ‘Political engagement’ reflected proportions voting in the last federal, provincial and municipal election; searching for information on a political issue; volunteering in a political party; expressing views in a newspaper or to a politician; signing a petition; boycotting a product for ethical reasons; attending and speaking out at a public meeting; participating in a demonstration or march. ‘Volunteering and charitable giving’ pertained to the number of hours spent volunteering in the past month, and the proportion of those donating money or goods to an organization, the type not being specified.

Data Analysis

In determining differential importance, we empirically tested the effects of perceived health limitations, the physical environment, quality social and religious support and civic participation upon all four life domains using logistic regression (deMaris, 1995). Doing so allowed us to identify those resources most likely to significantly enhance the odds of being satisfied and the domains wherein such effects took place. All item-to-item correlations observed between study variables in the initial model were 0.35 or less (Hinkle, 1988; Shortell, 2007), leading us to

exclude spiritual beliefs and health-related limitations in transport, leisure and other activities, and sensory, mobility and learning ability. A purposeful-selection method, namely backward stepping, was then used to determine variables important in the final model (Hosmer and Lemeshow, 1999). Our use of SUDAAN software within a logistic regression framework permitted a Balanced Repeated Replication (BRR) akin to repetitive sampling for generating quality or unbiased estimates of variance (Phillips, 2004). Estimates and their 95% confidence intervals were generated using the two-hundred bootstrap weights provided for users of the General Social Survey by Statistics Canada (2004). To generalize our findings beyond the studied sample, we controlled for gender, age, marital status, income and education.

Results

The frequency distributions shown in Table 1 provide evidence of positive associations between resources of interest in this study across all four domains of life. There was a higher propensity for being satisfied among Canadian seniors engaging in civic activities, having quality social relationships within the informal sector, and residing in safe, familiar and neighbourly environments reported across all four domains of life. Health-related limitations yielded far greater discrepancies. We also found lower overall proportions of satisfied Canadian seniors within the financial domain. [insert Table 1 about here]

Our univariate analysis shown in Table 2 indicates the odds of being satisfied with health, time, finances and main activities is significantly associated with higher resource holdings for the vast majority of our independent variables. Exceptions were receiving informal help with teaching, coaching or giving practical advice across all four domains, duration of residence in the health

domain, seeking political information in the time use domain, and being in a demonstration or march in relation to finances and main activities. Religious attendance was not associated with the satisfaction with time use or finances. [insert Table 2 about here]

At the multivariate level, each life domain model was statistically significant ($p < .001$), as were resource variables shown in Table 3 for which corresponding odds ratios and 95% confidence intervals are reported. Explained variance in satisfaction ranged from .12 for time use to .21 for health. Canadian seniors in poor or fair health were significantly more likely to be satisfied with their time use, as were those not having trouble sleeping or a physical or mental condition limiting opportunities for further work or education. Those not donating money or goods to organizations were 30% and not affiliated with cultural, educational or hobby groups were nearly 40% less likely to be satisfied with their time use. Respondents having no relatives or 1 to 2 whom they felt close to, at ease with talking to, and could call on for help, reduced the odds of being satisfied by 46% and 25% respectively. One aspect of the physical environment, namely, knowing no or few people in one's neighbourhood had a detrimental effect. For every one unit increase in the sense of mastery, the odds of being satisfied with time use increased by 10%.

In the health domain model, those in poor to fair health were significantly less likely to be satisfied than were those in good to excellent health. Canadian seniors not having a physical or mental condition limiting opportunities for further work or education, and trouble sleeping respectively were 1.83 and 2.49 times more likely to be satisfied with their health. Those having 3 or more close, supportive relatives were significantly more satisfied with their health than

those having none. For every one unit increase in the sense of mastery, the odds of being satisfied with time use increased by 7%.

With respect to finances, Canadian seniors in poor or fair health were 1.8 times more likely to be satisfied with their finances than those in good or excellent health. Those having no trouble sleeping or limitations in further work or education were 1.3 times more likely to be satisfied. Those not engaging in charitable work through giving monetary donations or goods or not being a member of a cultural, educational or hobby group had far lesser odds of being satisfied with their finances, these being .59 and .67 respectively. Not voting in the last federal election and living in a place where neighbours did not help one another was of further detriment. Again, the sense of mastery was statistically significant.

In the main activity model, respondents in poor or fair health in older age had a significantly lesser odds of being satisfied than did those in good to excellent health. Further, not having trouble sleeping or a condition limiting activities at home increased the likelihood of being satisfied by 1.71 and 2.41 times respectively. Those not engaging in charitable work were more likely to be dissatisfied, as were those not taking part in a sports or recreation league or group. Compared with those having 3 or more close supportive relatives, seniors having none were 41% less likely to be satisfied with their main activity; a similar pattern was observed among those reporting having 1 to 2 friends. Those not attending religious services were 27% less likely to be satisfied with their main activity. As was the case in all other models, a higher sense of mastery was beneficial. [insert Table 3 about here]

Discussion

Our results offer preliminary evidence of the differential importance of personal and environmental resources to older Canadians across four life domains. We found unique variations in patterns of significance across all four domains of life, a number of these being counterintuitive findings warranting further discussion.

Our finding draws attention to the idiosyncratic ways of maximizing well-being in older age and more specifically, that social resources might compensate for physical losses (Steverink, Lindenberg and Ormel, 1998; Steverink, Lindenberg and Slaets, 2005). Contrary to what we had expected, those in poor or fair health having the higher likelihood of being satisfied with time use. Surprisingly, however, numbers of close friends for confiding in and calling upon for help, not kin, were of significant benefit, and the higher the number, the greater the benefit derived. Though nearly two-thirds (64.5%) of Canadian seniors had resided in their current neighbourhood for 10 or more years, knowing many or most neighbours (48.4%) was instead, of similar benefit. These findings illustrate the importance of discretionary ties to neighbours and friends (Cornwell, Laumann and Schumm, 2008) as communal relations often operating through the exchange of favours or the reinforcement of shared identity (Reimer, Lyons, Ferguson and Polanco, 2008). Late-life friendships, akin to sibling ties, are characterized by a similar status in terms of age and social class, long-term reciprocity, and a shared history fostering self-continuity (MacRae, 1996). Canadian seniors also turned to their community ties through taking part in charitable work (77.2%) and cultural, educational or hobby groups (17.6%) as satisfying ways of spending time. Older people may reap benefit from these associative relationships through

pursuing shared interests and common goals (Reimer, Lyons, Ferguson and Polanco, 2008), and belonging and connectedness (Thurerer and Wister, in press).

Ill health was also not of detriment to finances. In more closely investigating this finding, we noted that despite approximately 39% of respondents reporting a personal income of \$30,000 or less, only 24.8% actually reported not being satisfied with their finances. While it appears that subjective income perceptions do not always mirror objective economic status in older age (Ballantyne and Marshall, 2001), other compensatory resources may be at work. Neighbours helping neighbours is one mechanism expanding the potential pool of support services within a local setting and building community capacity (Victorino and Gauthier, 2002). Nearly one-third (32.7%) of participants receiving regular unpaid help reported people in the neighbourhood as the source. Seemingly, neighbour relations are akin to market relations operating through the open and free exchanges of goods or services (Reimer, Lyons, Ferguson and Polanco, 2008). While our finding, that close kin did not enhance the satisfaction with finances, supports the findings of others (Rosenthal, Martin-Matthews and Matthews, 1996; Rosenthal, Martin-Matthews and Keefe, 2007), it might be that neighbours provide a financial buffer for seniors and indirectly, their families by offering assistance *in-kind*. Our finding that federal voting also enhanced the satisfaction with finances speaks to Grundy's (2006) contention that main sources of income in older age are often dependent upon the decisions made by external parties such as governments and pension-fund managers. Nearly half (44.7%) of Canadian seniors reported pension plans as their main source of income, albeit public or private, 19.1% relied on old age security and income supplements. While pension income is seen as both a benefit and a security (Bassett, Bourbonnais and McDowell, 2007), age has been found to inversely predict being

satisfied with expected future income and investments (Ballantyne and Marshall, 2001). The greater odds of being dissatisfied among those nearing the cusp of retirement, and the importance of sleep quality and federal voting behaviour (86.2%) may reflect worry over and compensatory efforts for securing an economic future.

Older Canadians experiencing ill health could also be resilient. Resilience, a psychosocial resource possible for all older people, has to do with the adaptive use of resources to negotiate age-salient developmental challenges (Harris, 2008). Resilience enhances older adults' ability to sustain social connections and interests, and to manage one way or another (Windle, Markland and Woods, 2008). We found older Canadians took great pains to extend their social networks to friends, neighbours and community to manage their time and financial circumstances. Mastery, as a self-management resource, being important to time use and unexpectedly to finances is another case in point.

The patterns of differing importance in this study align with social production function theory as resources are used by older people in idiosyncratic ways to best meet their needs (Steverink, Lindenberg and Ormel, 1998; Steverink, Lindenberg and Slaets, 2005). We are also reminded of the functional specificity of relationships in that certain groups may be better suited for some tasks, necessitating a diverse set of supportive relationships (Connidis and McMullin, 1992). Religious affiliates for example, were important to main activities. In the health domain, contrary to others' findings (Penning, 2002; Sims-Gould and Martin-Matthews, 2007), neither friends nor neighbours appeared to be important; rather, it was family alone. The non-significant difference in having 1 or 2 versus 3 or more relatives suggests that close kin, no matter the number, count

when it comes to health. Hence, while resources might serve different purposes based on personal preference as Connidis and McMullin (1992) point out, there may be a need for different hierarchies of supportive ties in older age.

Though their focus is on time allocations to leisure in older age, Gauthier and Smeeding (2003) draw attention to utility maximization processes, these being dependent on resource constraints in health, family and opportunities for activity. Social productivity pertains to internal resourcefulness despite ill health, marked by resiliency and compensatory action. The informal sector, albeit family, friend, neighbour or community group ties, enhance the satisfactions with life. Our noting their differing and widespread importance across four life domains indicates personal and environmental resources available to older Canadians are stretched to optimize life satisfaction. As people age, declines in resources are likely; these reinforce one another and enhance vulnerability or frailty (Steverink, Linderberg and Slaets, 2005). Further declines in personal resources and relational capital (Reimer, Lyons, Ferguson and Polanco, 2008) would be detrimental to older Canadians on multiple levels, reducing their compensatory capacities over their remaining life years. Although we found that old-olds were more likely to be satisfied with their time use and finances than their younger counterparts, these findings are cross-sectional. Resource-related initiatives to reduce vulnerability are needed (WHO, 2002) yet little clarity exists around resource needs and the mechanisms by which resources optimize well-being over the life span (Steverink, Linderberg and Slaets, 2005). Helping older people without close kin or friends connect with social outlets of interest might strengthen their sense of mastery (Hilleras, Pollitt, Medway and Ericsson, 2000), a personal resource important to all life domains in this study. That job interruptions or loss in older age pose economic and health detriments (He,

Calantonio and Marshall, 2001) suggests seniors with health constraints limiting work and education might benefit from tailored, accessible sport or recreation programs (Acree, Longfors, Fjeldstad, Fjeldstad, Schank, Nickel, Montgomery and Gardner, 2006).

Our methods pose several limitations. Items identifying all sources of household income to further explore the absence of a link between close kin and finances were suppressed. In light of our findings on ill health and time use, using cross-sectional data did not permit exploring how activity patterns change in response to declines in health. The use of non-PUMF data would permit rural versus urban and cross-provincial comparisons. Qualitative research would enhance our understanding of the resources older people value, and whether and how these change over time.

In closing, resources are likely to be differentially important in older age. Our findings highlight idiosyncratic patterns of resource use across four aspects of older Canadians lives, reflecting perhaps personal preferences, functional specificities, or maximum utility. With the exception of ill health augmenting satisfactions with time use and finances, having few personal and environmental resources likely enhances vulnerability to frailty. Resource-related initiatives are imperative given the ever-increasing life expectancy in Canada (Statistics Canada, 2006). We identify a few interventions potentially benefiting multiple life satisfactions; however, further research is needed. Longitudinally examining the purpose and utility of resources valued by older Canadians across multiple life domains would augment our understanding of how personal and environmental resources better their lives.

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Table 1. Distributions of the satisfaction with time use, health, finances and main activity among Canadian seniors

| Variable name | Categories | Time Use (Yes %) | Health (Yes %) | Finances (Yes %) | Main Activity (Yes %) |
|---|-------------------|-----------------------------|---------------------------|-----------------------------|----------------------------------|
| Perceived health | Poor/fair | 66.55 | 45.04 | 55.21 | 63.96 |
| | Good/excellent | 90.33 | 90.08 | 79.09 | 90.80 |
| Trouble going to or staying asleep | No | 87.96 | 84.55 | 76.56 | 88.46 |
| | Yes | 76.64 | 65.70 | 65.33 | 74.84 |
| Physical or mental condition limiting activity at home | No | 87.22 | 83.20 | 75.19 | 87.60 |
| | Yes | 64.12 | 51.08 | 58.10 | 62.18 |
| Number of relatives you feel close to, at ease to talk with, can call on for help | None | 74.32 | 69.28 | 62.42 | 74.43 |
| | 1-2 | 81.38 | 76.24 | 70.06 | 81.62 |
| | 3 or more | 87.42 | 81.93 | 76.47 | 87.12 |
| Number of friends you feel close to, at ease to talk with, can call on for help | None | 73.25 | 71.86 | 63.08 | 75.17 |
| | 1-2 | 82.36 | 77.76 | 70.48 | 81.41 |
| | 3 or more | 85.07 | 81.70 | 76.77 | 87.81 |
| Religious support (attendance) | Not attending | 82.38 | 77.11 | 71.92 | 81.39 |
| | Attending | 86.56 | 81.04 | 74.52 | 86.94 |
| Received help with transport or running errands | No | 85.94 | 81.31 | 74.55 | 86.13 |
| | Yes | 80.78 | 71.41 | 68.82 | 79.05 |
| Received help with teaching, coaching, or giving practical advice | No | 84.66 | 79.2 | 73.31 | 84.61 |
| | Yes | 87.40 | 81.42 | 74.79 | 86.51 |
| Helped someone with domestic or outdoor work, home maintenance | No | 83.28 | 77.34 | 72.64 | 83.02 |
| | Yes | 90.26 | 86.42 | 76.61 | 90.60 |
| Helped someone with transport or running errands | No | 83.01 | 77.06 | 72.61 | 82.65 |
| | Yes | 89.18 | 84.92 | 75.72 | 89.55 |
| Helped someone with child care | No | 83.69 | 78.36 | 72.75 | 83.47 |
| | Yes | 89.69 | 83.77 | 76.80 | 89.97 |
| Volunteer work | No | 81.77 | 76.51 | 70.49 | 81.76 |
| | Yes | 92.02 | 86.51 | 80.49 | 91.63 |
| Donating money or goods to an organization | No | 75.71 | 71.65 | 58.65 | 75.02 |
| | Yes | 87.25 | 81.49 | 77.33 | 87.24 |
| Member or participant of union or professional | No | 84.29 | 78.45 | 72.17 | 84.30 |

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| | | | | | |
|---|-----------------------------------|-------|-------|-------|-------|
| organization | Yes | 89.94 | 87.14 | 83.02 | 88.57 |
| Member or participant of sports or recreation league or club | No | 83.30 | 77.76 | 71.75 | 82.97 |
| | Yes | 91.98 | 87.10 | 81.11 | 92.63 |
| Member or participant of cultural, educational or hobby group | No | 83.20 | 78.29 | 70.93 | 83.13 |
| | Yes | 92.68 | 84.93 | 84.98 | 92.23 |
| Member or participant of religious affiliated group | No | 83.56 | 77.70 | 71.16 | 83.08 |
| | Yes | 89.95 | 86.03 | 81.93 | 90.98 |
| Member or participant of a school group, neighbourhood, civic or community organization | No | 84.21 | 78.66 | 72.75 | 84.03 |
| | Yes | 90.91 | 86.32 | 79.82 | 91.19 |
| Voted last federal election | No | 78.87 | 70.17 | 62.11 | 76.75 |
| | Yes | 85.81 | 80.70 | 75.01 | 85.83 |
| Searched for information on a political issue | No | 84.49 | 78.43 | 72.40 | 83.79 |
| | Yes | 87.08 | 84.33 | 78.32 | 89.20 |
| Signed a petition | No | 84.00 | 78.11 | 72.23 | 83.55 |
| | Yes | 89.31 | 85.91 | 78.93 | 90.16 |
| Spoke out at public meeting | No | 84.25 | 78.75 | 72.96 | 84.28 |
| | Yes | 92.21 | 86.72 | 79.21 | 89.86 |
| In a demonstration or march | No | 84.82 | 79.20 | 73.39 | 84.76 |
| | Yes | 92.77 | 91.87 | 79.46 | 88.94 |
| Volunteered for a political party | No | 84.75 | 79.20 | 72.98 | 84.52 |
| | Yes | 91.27 | 87.71 | 85.42 | 91.70 |
| Whom in your neighbourhood do you know | Nobody/few | 82.22 | 76.89 | 70.66 | 82.32 |
| | Many/most | 87.77 | 82.29 | 76.73 | 87.49 |
| Place where neighbours help each other | No | 78.69 | 75.32 | 64.37 | 78.77 |
| | Yes | 86.89 | 81.37 | 76.00 | 86.60 |
| Duration of residence | <5 years | 82.11 | 77.34 | 68.75 | 81.91 |
| | 5 years or more | 85.70 | 80.10 | 74.71 | 85.56 |
| Safe from crime walking home alone after dark | Somewhat/very unsafe /never alone | 81.40 | 72.91 | 68.59 | 80.71 |
| | Reasonably/very safe | 87.49 | 84.16 | 76.93 | 87.79 |
| Worried when home alone at night | Worried/never alone | 78.54 | 72.54 | 65.34 | 80.08 |
| | Not at all worried | 86.39 | 81.09 | 75.38 | 85.99 |

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| | | | | | |
|----------------|-----------------------|-------|-------|-------|-------|
| Education | Less than secondary | 79.68 | 73.26 | 65.25 | 79.55 |
| | Secondary graduate | 87.23 | 83.45 | 74.48 | 87.24 |
| | Post secondary/higher | 89.12 | 84.40 | 80.49 | 88.94 |
| Age | 60-69 | 86.50 | 82.36 | 73.25 | 86.21 |
| | 70-79 | 85.52 | 77.66 | 72.60 | 84.87 |
| | 80+ | 78.58 | 74.34 | 76.36 | 79.87 |
| Gender | Female | 86.48 | 78.81 | 73.96 | 85.64 |
| | Male | 83.07 | 80.18 | 72.99 | 83.72 |
| Marital status | Not married | 81.83 | 75.08 | 66.00 | 81.19 |
| | Married | 86.63 | 81.80 | 77.60 | 86.69 |
| Income | <\$15000 | 80.64 | 72.51 | 59.63 | 79.38 |
| | \$15000-\$29999 | 82.67 | 79.31 | 69.74 | 84.22 |
| | >\$30000 | 90.16 | 88.59 | 87.62 | 91.57 |
| | Unknown | 84.87 | 77.24 | 73.56 | 83.29 |

Table 2. Univariate analysis of the satisfaction with time use, health, finances, and main activity among Canadian seniors

| Variable name | Categories | Model 1 Time use Odds ratio (95% CI) | Model 2 Health Odds ratio (95% CI) | Model 3 Finances Odds ratio (95% CI) | Model 4 Main Activity Odds ratio (95% CI) |
|---|----------------|---|---|---|--|
| Perceived health | Poor/fair | 1 | 1 | 1 | 1 |
| | Good/excellent | 4.7 (4.0, 5.6)** | 11.1 (9.5, 12.9)** | 3.1 (2.7, 3.5)** | 5.6 (4.7, 6.7)** |
| Trouble going to or staying asleep | No | 1 | 1 | 1 | 1 |
| | Yes | 0.5 (0.4, 0.5)** | 0.4 (0.3, 0.4)** | 0.6 (0.5, 0.7)** | 0.4 (0.3, 0.5)** |
| Physical or mental condition limiting activity at home | No | 1 | 1 | 1 | 1 |
| | Yes | 0.3 (0.2, 0.3)** | 0.2 (0.2, 0.3)** | 0.5 (0.4, 0.6)** | 0.2 (0.2, 0.3)** |
| Number of relatives you feel close to, at ease to talk with, can call on for help | None | 0.4 (0.3, 0.6)** | 0.5 (0.4, 0.6)** | 0.5 (0.4, 0.7)** | 0.4 (0.3, 0.6)** |
| | 1-2 | 0.6 (0.5, 0.8)** | 0.7 (0.6, 0.9)** | 0.7 (0.6, 0.8)** | 0.7 (0.5, 0.8)** |
| | 3 or more | 1 | 1 | 1 | 1 |
| Number of friends you feel close to, at ease to talk with, can call on for help | None | 0.4 (0.3, 0.5)** | 0.6 (0.5, 0.7)** | 0.5 (0.4, 0.6)** | 0.4 (0.3, 0.6)** |
| | 1-2 | 0.6 (0.5, 0.8)** | 0.8 (0.7, 0.9)** | 0.7 (0.6, 0.9)** | 0.6 (0.5, 0.7)** |
| | 3 or more | 1 | 1 | 1 | 1 |
| Religious support (attendance) | Not attending | 1 | 1 | 1 | 1 |
| | Attending | 1.0 (0.8, 1.3) | 1.3 (1.1, 1.5)** | 1.1 (1.0, 1.3) | 1.5 (1.3, 1.8)** |
| Received help with transport or running errands | No | 1 | 1 | 1 | 1 |
| | Yes | 0.7 (0.6, 0.8)** | 0.6 (0.5, 0.7)** | 0.8 (0.7, 0.9)** | 0.6 (0.5, 0.7)** |
| Received help with teaching, coaching, or giving practical advice | No | 1 | 1 | 1 | 1 |
| | Yes | 1.3 (1.0, 1.7) | 1.2 (0.9, 1.4) | 1.1 (0.9, 1.3) | 1.2 (0.9, 1.6) |
| Helped someone with domestic or outdoor work, home maintenance | No | 1 | 1 | 1 | 1 |
| | Yes | 1.9 (1.5, 2.3)** | 1.9 (1.6, 2.3)** | 1.2 (1.0, 1.5)* | 2.0 (1.5, 2.5)** |
| Helped someone with transport or running errands | No | 1 | 1 | 1 | 1 |
| | Yes | 1.7 (1.4, 2.1)** | 1.7 (1.4, 2.0)** | 1.2 (1.0, 1.4)* | 1.8 (1.5, 2.2)** |
| Helped someone with child care | No | 1 | 1 | 1 | 1 |
| | Yes | 1.7 (1.3, 2.2)** | 1.4 (1.2, 1.7)** | 1.2 (1.0, 1.5)* | 1.8 (1.4, 2.3)** |
| Volunteer work | No | 1 | 1 | 1 | 1 |
| | Yes | 2.6 (2.1, 3.2)** | 2.0 (1.6, 2.4)** | 1.7 (1.5, 2.0)** | 2.4 (2.0, 3.0)** |
| Donating money or goods to an | No | 1 | 1 | 1 | 1 |

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| | | | | | |
|---|-----------------|------------------|------------------|------------------|------------------|
| organization | Yes | 2.2 (1.8, 2.7)** | 1.7 (1.5, 2.0)** | 2.4 (2.0, 2.8)** | 2.3 (1.9, 2.8)** |
| Member or participant of union or professional organization | No | 1 | 1 | 1 | 1 |
| | Yes | 1.7 (1.3, 2.2)** | 1.9 (1.4, 2.4)** | 1.9 (1.5, 2.4)** | 1.4 (1.1, 1.9)** |
| Member or participant of sports or recreation league or club | No | 1 | 1 | 1 | 1 |
| | Yes | 2.3 (1.7, 3.1)** | 1.9 (1.5, 2.5)** | 1.7 (1.4, 2.1)** | 2.6 (1.9, 3.5)** |
| Member or participant of cultural, educational or hobby group | No | 1 | 1 | 1 | 1 |
| | Yes | 2.6 (2.0, 3.3)** | 1.6 (1.3, 1.9)** | 2.3 (1.9, 2.9)** | 2.4 (1.8, 3.2)** |
| Member or participant of religious-affiliated group | No | 1 | 1 | 1 | 1 |
| | Yes | 1.8 (1.4, 2.2)** | 1.8 (1.5, 2.1)** | 1.8 (1.5, 2.2)** | 2.1 (1.6, 2.6)** |
| Member or participant of a school group, neighbourhood, civic or community organization | No | 1 | 1 | 1 | 1 |
| | Yes | 1.9 (1.4, 2.6)** | 1.7 (1.3, 2.2)** | 1.5 (1.2, 1.9)** | 2.0 (1.4, 2.8)** |
| Voted last federal election | No | 1 | 1 | 1 | 1 |
| | Yes | 1.6 (1.3, 2.1)** | 1.8 (1.4, 2.2)** | 1.8 (1.5, 2.3)** | 1.8 (1.5, 2.3)** |
| Searched for information on a political issue | No | 1 | 1 | 1 | 1 |
| | Yes | 1.2 (0.9, 1.6) | 1.5 (1.2, 1.8)** | 1.4 (1.1, 1.7)** | 1.6 (1.2, 2.1)** |
| Signed a petition | No | 1 | 1 | 1 | 1 |
| | Yes | 1.6 (1.2, 2.0)** | 1.7 (1.4, 2.1)** | 1.4 (1.2, 1.7)** | 1.8 (1.4, 2.3)** |
| Spoke out at public meeting | No | 1 | 1 | 1 | 1 |
| | Yes | 2.2 (1.5, 3.2)** | 1.8 (1.3, 2.4)** | 1.4 (1.1, 1.8)** | 1.7 (1.1, 2.4)** |
| Took part in a demonstration or march | No | 1 | 1 | 1 | 1 |
| | Yes | 2.3 (1.3, 4.2)** | 3.0 (1.7, 5.1)** | 1.4 (0.9, 2.2) | 1.5 (0.8, 2.5) |
| Volunteered for a political party | No | 1 | 1 | 1 | 1 |
| | Yes | 1.9 (1.1, 3.4)* | 1.9 (1.2, 3.0)* | 2.2 (1.4, 3.4)** | 2.0 (1.2, 3.4)** |
| Whom in your neighbourhood do you know | Nobody/few | 1 | 1 | 1 | 1 |
| | Many/most | 1.6 (1.3, 1.8)** | 1.4 (1.2, 1.6)** | 1.4 (1.2, 1.6)** | 1.5 (1.3, 1.8)** |
| Place where neighbours help each other | No | 1 | 1 | 1 | 1 |
| | Yes | 1.8 (1.5, 2.2)** | 1.4 (1.2, 1.7)** | 1.8 (1.5, 2.1)** | 1.7 (1.4, 2.2)** |
| Duration of residence | <5 years | 1 | 1 | 1 | 1 |
| | 5 years or more | 1.3 (1.1, 1.60)* | 1.2 (1.0, 1.4) | 1.3 (1.1, 1.6)** | 1.3 (1.1, 1.6)* |

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| | | | | | |
|---|----------------------------------|------------------|------------------|------------------|------------------|
| Safe from crime walking home alone after dark | Somewhat/very unsafe/never alone | 1 | 1 | 1 | 1 |
| | Reasonably/very safe | 1.6 (1.3, 1.9)** | 2.0 (1.7, 2.3)** | 1.5 (1.3, 1.8)** | 1.7 (1.4, 2.1)** |
| Worried when home alone at night | Worried/never alone | 1 | 1 | 1 | 1 |
| | Not at all worried | 1.7 (1.4, 2.2)** | 1.6 (1.3, 2.0)** | 1.6 (1.4, 1.9)** | 1.5 (1.2, 1.9)** |
| Education | Less than secondary | 0.5 (0.4, 0.6)** | 0.5 (0.4, 0.6)** | 0.5 (0.4, 0.5)** | 0.5 (0.4, 0.6)** |
| | Secondary graduate | 0.8 (0.6, 1.1) | 0.9 (0.7, 1.2) | 0.7 (0.6, 0.9)** | 0.9 (0.6, 1.2) |
| | Post secondary/higher | 1 | 1 | 1 | 1 |
| Age | 60-69 | 1.8 (1.4, 2.2)** | 1.6 (1.3, 2.0)** | 0.9 (0.7, 1.1) | 1.6 (1.2, 2.0)** |
| | 70-79 | 1.6 (1.3, 2.0)** | 1.2 (0.9, 1.5) | 0.8 (0.7, 1.0) | 1.4 (1.1, 1.8)** |
| | 80+ | 1 | 1 | 1 | 1 |
| Gender | Female | 1 | 1 | 1 | 1 |
| | Male | 0.8 (0.6, 0.9)** | 1.1 (0.9, 1.3) | 1.0 (0.8, 1.1) | 0.9 (0.7, 1.0) |
| Marital status | Not married | 1 | 1 | 1 | 1 |
| | Married | 1.4 (1.2, 1.7)** | 1.5 (1.3, 1.7)** | 1.8 (1.6, 2.0)** | 1.5 (1.3, 1.8)** |
| Income | <\$15000 | 1 | 1 | 1 | 1 |
| | \$15000-\$29999 | 1.2 (0.9, 1.5) | 1.5 (1.2, 1.8)** | 1.6 (1.3, 1.9)** | 1.4 (1.1, 1.8)** |
| | >\$30000 | 2.2 (1.7, 2.9)** | 2.9 (2.3, 3.7)** | 4.8 (3.8, 6.1)** | 2.8 (2.1, 3.7)** |
| | Unknown | 1.4 (1.1, 1.7)** | 1.3 (1.1, 1.5)** | 1.9 (1.6, 2.2)** | 1.3 (1.0, 1.6)* |

Table 3: Personal and Environmental Resources predicting Life Satisfaction among Canadian Seniors

| Dependent variable | Life satisfaction (Time Use) Odds Ratio (95% CI) | Life satisfaction (Health) Odds Ratio (95% CI) | Life satisfaction (Finances) Odds Ratio (95% CI) | Life satisfaction (Main activity) Odds Ratio (95% CI) |
|---|---|---|---|--|
| Health and Activity Limitations | | | | |
| Perceived Health (Good/excellent) | 2.59 (2.04-3.29)*** | .13 (.11-.17)*** | 1.79 (1.45-2.20)*** | .42 (.32-.54)*** |
| Trouble going to or falling asleep (Yes) | 1.67 (1.34-2.07)*** | 1.83 (1.47-2.29)*** | 1.32 (1.08-1.61)** | 1.71 (1.35-2.18)*** |
| Physical or mental condition limiting activity at school or work (Yes) | 2.26 (1.74-2.94)*** | 2.49 (1.89-3.29)*** | 1.36 (1.03-1.80)* | |
| Physical or mental condition limiting activity at home (Yes) | | | | 2.41 (1.88-3.11)*** |
| Civic Engagement | | | | |
| Donating money or goods to an Organization (Yes) | .70 (.53-.91)** | | .59 (.47-.74)*** | .70 (.52-.93)* |
| Member or participant of cultural, educational or hobby (theater, book, bridge) group (Yes) | .63 (.45-.88)** | | .67 (.53-.85)** | |
| Member or participant in sports or recreation league or club (Yes) | | | | .62 (.43-.88)** |
| Voted in last federal election (Yes) | | | .74 (.56-.99)* | |
| Physical Environment | | | | |
| Whom in your neighbourhood do you Know (Many/most) | .77 (.62-.96)* | | | |
| Safe from crime walking home alone | | .76 (.61-.95)* | | |

| | | | | |
|---|---------------------|---------------------|---------------------|---------------------|
| after dark (Reasonably/very safe) | | | | |
| Place where neighbours help each other (Yes) | | | .77 (.63-.95)* | |
| Quality social support | | | | |
| Number of relatives whom you feel close to, at ease to talk with, can call on for help (3 or more) | | | | |
| None | | .60 (.41-.89)* | | .59 (.40-.87)** |
| 1 to 2 | | .85 (.66-1.09) | | .89 (.69-1.16) |
| Number of friends whom you feel close to, at ease to talk with, can call on for help (3 or more) | | | | |
| None | .54 (.38-.77)*** | | | .70 (.48-1.01) |
| 1 to 2 | .75 (.57-.98)* | | | .75 (.59-.96)* |
| Attends religious services or meetings other than on special occasions? (Attends yearly, monthly, weekly) | | | | .73 (.58-.92)** |
| The sense of mastery | 1.10 (1.07-1.13)*** | 1.07 (1.05-1.10)*** | 1.08 (1.05-1.10)*** | 1.10 (1.06-1.13)*** |
| Control Variables | | | | |
| Annual income (Unknown) | | | | |
| <\$15000 | | .93 (.70-1.23) | .57 (.46-.71)*** | .86 (.65-1.14) |
| \$15000 - \$29999 | | 1.06 (.80-1.40) | .80 (.63-1.02) | .94 (.69-1.28) |
| >\$30000 | | 1.50 (1.10-2.06)* | 2.21 (1.66-2.96)*** | 1.46 (1.02-2.09)* |
| Marital Status (Married) | | | .50 (.42-.60)*** | |
| Gender (Male) | 1.72 (1.36-2.17)*** | 1.30 (1.05-1.61)* | 1.84 (1.53-2.20)*** | 1.63 (1.28-2.07)*** |

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| | | | | |
|--------------------------------------|--------------------|--------------|------------------|--------------|
| Age (80+) | | | | |
| 60-69 | 1.36 (1.00-1.84) | | .50 (.37-.68)*** | |
| 70-79 | 1.52 (1.12-2.07)** | | .62 (.45-.84)** | |
| Education (Post-secondary or higher) | | | | |
| Less than secondary | | | .82 (.68-.98)* | |
| Secondary graduate | | | .88 (.66-1.16) | |
| N | 4331 | 4459 | 4126 | 4314 |
| Wald F, Degrees of Freedom | 78.31, 19*** | 85.41, 18*** | 57.73, 18*** | 61.24, 21*** |
| Nagelkerke R-squared | 0.12 | 0.21 | 0.14 | 0.14 |

Note: Regression coefficients are weighted to represent the proportions of all seniors in the population.

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

Reference groups are bracketed.