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by Heather Gilmour

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..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

Social participation and the health and well-being of Canadian seniors

by Heather Gilmour

Released online October 17, 2012

Abstract

Background
Social participation has been associated with health and well-being in older adults.

Data and methods
Data from the 2008/2009 Canadian Community Health Survey (CCHS)—Healthy Aging were used to examine the relationship between frequent social participation and self-perceived health, loneliness and life dissatisfaction in a sample of 16,369 people aged 65 or older. Multivariate logistic regression was used to identify significant relationships, while adjusting for potential confounders. The mediating role of social support and the prevalence of reported barriers to greater social participation were also examined.

Results
An estimated 80% of seniors were frequent participants in at least one social activity. As the number of different types of frequent social activities increased, so did the strength of associations between social participation and positive self-perceived health, loneliness, and life dissatisfaction. The associations generally remained significant, but were attenuated by individual social support dimensions. The desire to be more involved in social activities was reported by 21% of senior men and 27% of senior women.

Interpretation
Social participation is an important correlate of health and well-being in older adults. It may be that social support gained through social contacts is as important in these associations as the number of activities in which one participates frequently.

Keywords
Aging, cross-sectional study, health survey, social support

Author
Heather Gilmour (1-613-951-2114; Heather.Gilmour@statcan.gc.ca) is with the Health Analysis Division at Statistics Canada, Ottawa, Ontario K1A 0T6.

Older age is a transitional period when people experience changes not only in physical health, but also in social roles (for example, retirement, children are grown) that can influence opportunities for social participation.[1] Epidemiological studies suggest that social activities may be particularly important for older adults.[2] The possible health benefits include reduced risk of mortality,[3,4] disability[5-7] and depression,[8,9] and better cognitive health,[10-12] self-rated health[13,14] and health-related behaviours.[2] Thus, social participation has been integrated into research and policy frameworks of aging. For instance, social engagement—involvement in meaningful activities and maintaining close relationships—is a component of successful aging.[15]

The relationships between social participation and health are not well understood, and may operate through multiple pathways.[2,16] For example, the physiological impact of social isolation is hypothesized to influence the neuroendocrine and immune systems.[16] As well, social ties may encourage individuals to engage in health-promoting behaviours such as physical activity and seeking medical care, or to refrain from damaging ones such as smoking.[2,16]

The psychological effects of social connectedness may include feelings of self-efficacy, a sense of meaning and purpose, and better mental health.[2,16] In particular, interactions that provide social support are thought to be facilitators of health, in which case, perceived social support would act as a mediating factor between social participation and health and well-being.[9] Moreover, an individual's perceptions of the availability of social support are thought to be more

important than received support, which is confounded with need.[17]

This study examines the relationship between the number of social activities in which seniors "frequently" participate and three measures of health and well-being: self-perceived health, loneliness, and life dissatisfaction. The extent to which social *support* mediates the effect of social *participation* on health and well-being is considered. In addition, for the first time in a nationally representative Canadian study, reported barriers to greater social participation are examined.

Data source

The data for this analysis are from the 2008/2009 Canadian Community Health Survey (CCHS)—Healthy Aging. This cross-sectional survey collected information about factors, influences and processes that contribute to healthy aging from people aged 45 or older living in private dwellings in the ten provinces. The sampling frame excluded full-time members of the Canadian Forces and residents of the three territories, Indian reserves, Crown lands, institutions, and some remote areas. The survey was conducted from December 1, 2008 through November 30, 2009, using computer-assisted personal interviewing. Response rates were 80.8% (household level), 92.1% (person level), and 74.4% (combined), for a final sample of 30,865 respondents. This analysis uses a sample of 16,369 seniors (65 or older), representing 4.4 million people.

Definitions

Frequent social participation

Respondents were asked how often in the past 12 months (at least once a day, at least once a week, at least once a month, at least once a year, never) they participated in eight different activities. *Frequent participation* was classified as *at least weekly* for:

- family or friendship activities outside the household
- church or religious activities such as services, committees or choirs
- sports or physical activities with other people
- other recreational activities involving other people, including hobbies, bingo and other games

Frequent participation was classified as *at least monthly* for activities typically done less often:

- educational and cultural activities involving other people such as attending courses, concerts or visiting museums
- service club or fraternal organization activities
- neighbourhood, community or professional association activities
- volunteer or charity work

Health and well-being

CCHS—Healthy Aging respondents were asked: "In general, would you say your health is. . . ." The response options were dichotomized to reflect positive (excellent/very good/good) versus poor (fair/poor) *self-perceived health.*

The Three-Item Loneliness Scale[18] measures an individual's loneliness. On a three-point Likert scale (hardly ever, some of the time, often), respondents answered the questions: "How often do you feel:

- that you lack of companionship?"
- left out?"
- isolated from others?"

Higher scores indicated greater loneliness; the distribution was skewed toward lower scores. Scores were dichotomized to classify respondents in the top quintile of the frequency distribution as experiencing *loneliness.* Those classified as experiencing loneliness responded "some of the time" to two or more questions, or "often" to one or more questions.

Respondents were asked, "How do you feel about your life as a whole right now?" and answered based on a scale where 0 meant "very dissatisfied" and 10 meant "very satisfied." Respondents in the bottom quintile of the frequency distribution (a score of 6 or less) were classified as having *life dissatisfaction.*

In this study, the three measures of health and well-being were mildly to moderately correlated with each other. The Pearson correlation coefficients were -0.17 for self-perceived health and loneliness; -0.36 for self-perceived health and life dissatisfaction; and 0.23 for loneliness and life dissatisfaction. Despite some overlap in the three variables, they are treated as individual constructs in this analysis.

Covariates

Three *age groups* were defined: 65 to 74, 75 to 84, and 85 or older. In logistic regression models, *age* was measured as a continuous variable and contained values of 65 or more.

Household income quintiles were defined: lowest, low-middle, middle, high-middle and highest.

Highest level of *education* was categorized as: less than secondary graduation, secondary graduation, some postsecondary, and postsecondary graduation.

Retirement status, based on Statistics Canada's standard definition of retirement (http://www.statcan.gc.ca/concepts/definitions/retirement-retraite-eng.htm), was categorized as completely retired and not completely retired. To be considered completely retired, the respondent could not be in the labour force and had to have received income from "retirement-like sources" during the past 12 months.[19] Respondents older than 75 were excluded from the labour force module of the CCHS—Healthy Aging, and so were considered to be completely retired for this analysis. Retirement-like income sources included dividends and interest; benefits from the Canada or Quebec Pension Plan; job-related retirement pensions, superannuation and annuities; RRSP or RRIF; and Old Age Security and Guaranteed Income Supplement.

The Health Utilities Index (HUI) Mark III assesses functional health status in eight domains: vision, hearing, speech, ambulation, dexterity, emotion, cognition, and pain and discomfort.[20,21] Overall scores were categorized into four levels of disability: none (1.00), mild (0.89 to 0.99), moderate (0.70 to 0.88), and severe (less than 0.70)

The number of *behavioural risk factors* was based on whether respondents reported heavy drinking (five or more drinks on one or more occasions monthly); were smokers (daily smoker or had quit less than 15 years ago), and were physically inactive (a score below the mean on the Physical Activity Scale for the Elderly).[22]

Social support was measured based on the Medical Outcomes Study (MOS) Social Support Survey.[17] This is a measure of *perceived* rather than actual social support received. All questionnaire items measuring social support use a standard preamble: "How often is each of the following kinds of support available to you if you need it?" Each item was scored according to the frequency with which support was available: none of the time (score 0), a little of the time (1), some of the time (2), most of the time (3), and all of the time (4).

- *Positive social interaction social support* reflects the availability of people for positive interaction, based on four questions about whether the respondent has someone with whom to have a good time, to relax, to get his/her mind off things, or to do something enjoyable. The maximum score was 16.
- *Tangible social support* assesses the availability of someone to provide material and/or behavioural assistance, based on four questions about whether the respondent has someone to help if confined to bed, to take him/her to the doctor, to prepare meals, or to do daily chores. The maximum score was 16.
- *Emotional or informational social support* refers to the expression of positive affect, empathetic understanding, encouragement of expressions of feelings, and offering of advice, guidance or feedback. It is based on eight questions about whether the respondent has someone to listen and to advise them in a crisis, to give information and confide in and talk to, or who understands his/her problems. The maximum score was 32.
- *Affection social support* involves expressions of love and affection, based on three questions about whether the respondent has someone who shows him/her love, to hug or to love him/her, and to make him/her feel wanted. The maximum score items was 12.

For each dimension of social support, a variable was derived based on the summed scores of responses to the individual items. The frequency distribution of responses for each dimension was skewed toward higher scores. For ease of interpretation in univariate and bivariate analysis, each variable was dichotomized so that respondents with scores in the lowest tercile of the frequency distribution were considered to have low social support (12 or less for positive interaction; 12 or less for tangible support; 25 or less for emotional or informational support; 10 or less for affection). Social support scores were used in their continuous forms (based on their summed scores) in multiple logistic regression models.

Analytical techniques

Frequencies and cross-tabulations weighted to be representative of the population aged 65 or older who resided in the provinces in 2008/2009 were produced to estimate the prevalence of social participation and barriers to social participation in the household population, and to examine characteristics associated with the health and well-being outcomes (Appendix Table A).

Logistic regression models were used to assess associations between the number of social activities in which a person frequently participated and measures of health and well-being. All analyses combined men and women in the same sample. An initial series of models controlled for the number of social activities in which respondents frequently participated, and age and sex. A second series added socio-demographic and health covariates that might also be associated with health and well-being: household income, education, retirement status, disability, and behavioural risk factors. To assess the mediating role of social support, the final models included the four social support dimensions. Because of the potential for multicolinearity, each social support variable was entered singly into the fully controlled models. This study presents only the results of the final models.

To account for the complex design of the CCHS, standard errors, coefficients of variation and confidence intervals were estimated with the bootstrap technique.[23,24] The statistical significance level was set at <0.05.

Results

Social support related to health and well-being

On the whole, Canadian seniors tended to report positive health and well-being—more than three-quarters perceived their health to be good, very good or excellent; less than one in five was classified as lonely or dissatisfied with life (Table 1). Younger seniors (65 to 74) were more likely than older seniors to have positive self-perceived health, and less likely to be lonely or to report life dissatisfaction. Women were more likely than men to be lonely.

Seniors with higher levels of household income and education, and who were not completely retired, were more likely to report positive self-perceived health, and less likely to be lonely or dissatisfied with life than were those in lower-income households, with less education, and who were retired.

The more severe the disability and the greater the number of behavioural risk factors, the less likely were seniors to report positive self-perceived health, and the more likely they were to be lonely or dissatisfied with life.

Seniors with low social support were less likely than were those with high social support to report positive self-perceived health, and more likely to be lonely and dissatisfied with life.

Table 1
Prevalence of positive self-perceived health, loneliness and life dissatisfaction, by selected characteristics, household population aged 65 or older, Canada excluding territories, 2008/2009

Characteristics	Positive self-perceived health	Loneliness	Life dissatisfaction
Total	**76.5**	**19.6**	**17.0**
Number of frequent social activities			
None†	63.1	29.0	27.8
One	71.3*	20.2*	21.2*
Two	78.5*	18.1*	15.2*
Three	84.0*	17.0*	13.0*
Four	86.2*	14.3*	10.0*
Five	88.3*	14.5*	6.6*
Six or more	89.6*	12.8*	5.7E*
Age group			
65 to 74†	80.3	18.7	15.3
75 to 84	73.2*	19.5	18.1*
85 or older	67.7*	25.1*	22.7*
Sex			
Men†	76.7	14.2	16.4
Women	76.3	24.1*	17.5
Household income			
Lowest†	69.0	24.3	23.2
Low-middle	77.6*	20.1*	15.5*
Middle	82.4*	16.6*	13.4*
High-middle	85.6*	14.1*	9.1*
Highest	86.6*	12.0*	10.4*
Education			
Less than secondary graduation†	69.1	22.0	21.4
Secondary graduation	80.2*	18.8*	15.1*
Some postsecondary	80.7*	18.8	16.0*
Postsecondary graduation	82.7*	17.7*	13.1*
Retirement status			
Retired†	75.4	21.0	17.6
Not completely retired	88.4*	14.4*	11.6*
Disability			
None†	94.6	8.8	6.3
Mild	89.6*	13.1*	8.1
Moderate	74.4*	23.6*	18.7*
Severe	50.3*	32.2*	35.7*
Risk behaviours			
None†	88.2	15.6	9.5
One	71.4*	21.3*	20.3*
Two	62.5*	24.5*	26.3*
Three	58.3*	35.1E*	30.4E
Social support			
Low positive social interaction†	71.2	37.3	26.4
High positive social interaction	80.4*	10.7*	12.0*
Low tangible†	71.7	33.7	24.1
High tangible	79.3*	12.0*	13.2*
Low emotional/Informational†	72.1	32.7	24.0
High emotional/Informational	79.5*	11.6*	12.7*
Low affection†	71.2	34.0	25.2
High affection	79.7*	11.7*	12.5*

† reference group
* significantly different from reference group (p<0.05)
E interpret with caution
Source: 2008/2009 Canadian Community Health Survey—Healthy Aging.

Frequent social participation

The majority of seniors (80%) were frequent participants in at least one social activity (Appendix Table A). As the number of activities increased, their likelihood of reporting positive self-perceived health rose, and their likelihood of reporting loneliness or life dissatisfaction decreased (Table 1).

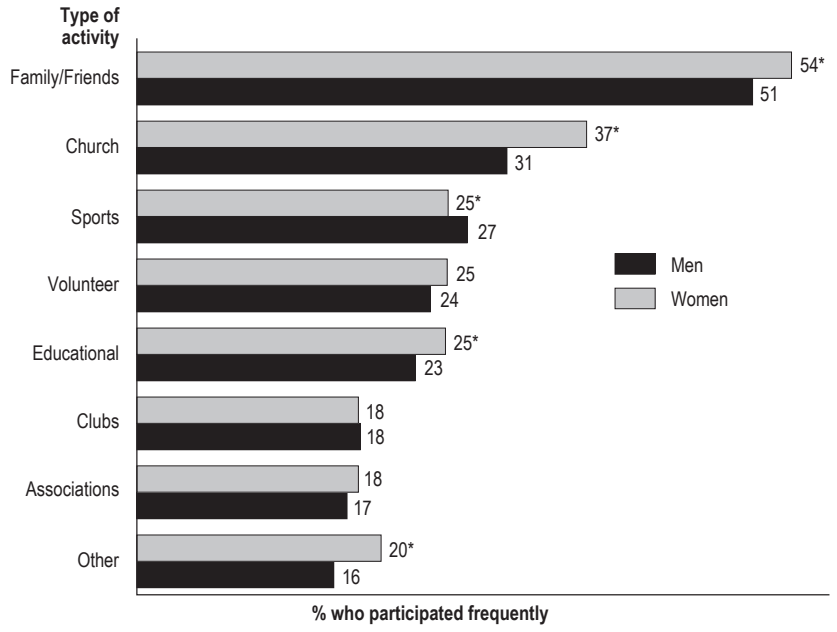
Activities with family or friends were the most common, with just over half of senior men and women participating frequently in this type of social activity (Figure 1). Women were more likely than men to be frequent participants in family and friend, church, educational and "other" activities, while men were more likely to be frequent participants in sports. With the exception of church and "other" activities, participation in most types of social activities was lower at older ages (Figure 2).

Associations with health and well-being persist

The number of social activities in which individuals frequently participated was strongly and significantly related to each of the health and well-being outcomes, independent of age and sex (data not shown). Even when socio-demographic and health characteristics were taken into account, the relationships between social participation and each health and well-being measure persisted, although they were attenuated (data not shown).

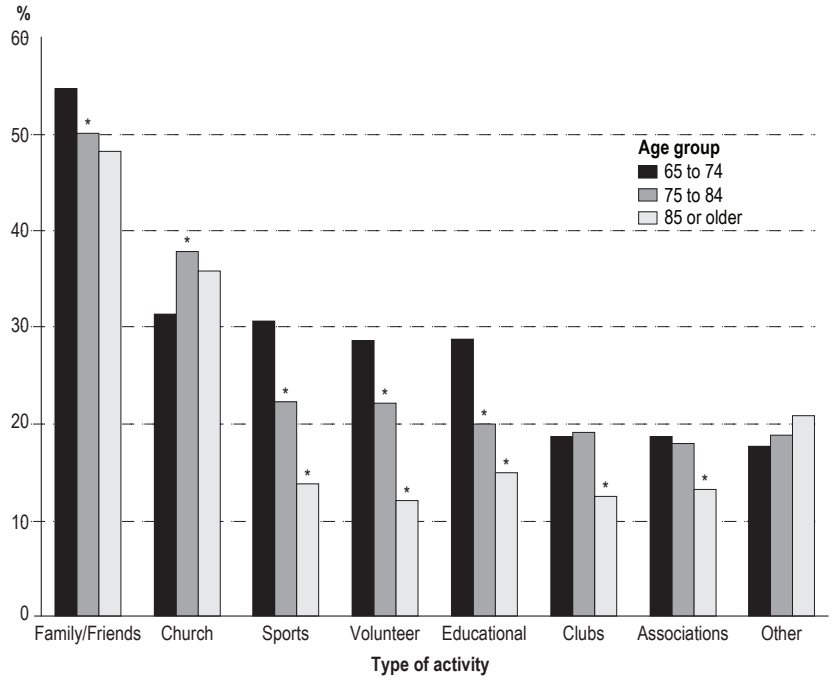
In the full models, which also controlled individually for the four dimensions of social support, the relationships between social participation and health and well-being were further attenuated, but remained significant in all but one instance (Table 2). Social participation was not significantly associated with loneliness when positive social interaction was controlled. In all other instances, a gradient in odds ratios was apparent with each increase in the number of activities, although to varying degrees for each outcome. Except for the association between affection and positive self-perceived health, each dimension of social support was, itself,

Figure 1
Percentage who participated frequently in social activities, by type of activity and sex, household population aged 65 or older, Canada excluding territories, 2008/2009



* significantly different from men (p<0.05)
Source: 2008/2009 Canadian Community Health Survey—Healthy Aging.

Figure 2
Percentage who participated frequently in social activities, by type of activity and age group, household population aged 65 or older, Canada excluding territories, 2008/2009



* significantly different from previous age group (p<0.05)
Source: 2008/2009 Canadian Community Health Survey—Healthy Aging.

significantly associated with each health and well-being outcome.

In multivariate analysis that controlled for age, sex and socio-demographic and health characteristics (but not social support), some factors that were significant in the bivariate analysis, such as income, disability and health behaviours (Table 1), remained significantly associated with each outcome, but education and retirement status were significantly associated only with self-perceived health (data not shown). When social support dimensions were added, the results for socio-demographic and health covariates were similar, except that the association between household income and loneliness was significant only for the highest income category.

Barriers to social participation

Nearly one in four seniors (24%) reported that they would have liked to have participated in more social, recreational or group activities in the past year. Younger seniors and women were more likely to have felt this way (Table 3).

The most commonly mentioned obstacle to participating in more activities was a health limitation (33% of men, 35% of women). Being too busy was also a leading reason, but more so among men (28%) than women (16%). Personal or family responsibilities prevented about 1 in 10 seniors from participating in more activities. Women were more likely than men to report not wanting to go alone to an activity (17% versus 9%) or transportation problems (11% versus 4%).

Social participation may not be entirely dependent upon personal choice—external factors can play a role. For example, the cost and the availability of activities in the area or at a suitable time or location can influence participation. Such barriers were reported by 4% to 9% of Canadian seniors.

Table 2
Adjusted odds ratios relating number of frequent social activities and social support dimensions to positive self-rated health, loneliness and life dissatisfaction, household population aged 65 or older, Canada, excluding territories, 2008/2009

Social support model and number of frequent social activities	Positive self-perceived health			Loneliness			Life dissatisfaction		
	Adjusted odds ratio	95% confidence interval		Adjusted odds ratio	95% confidence interval		Adjusted odds ratio	95% confidence interval	
		from	to		from	to		from	to
Positive social interaction model									
Number of frequent social activities									
None†	1.0	…	…	1.0	…	…	1.0	…	…
One	1.0	0.9	1.2	0.9	0.7	1.1	0.9	0.8	1.1
Two	1.4*	1.1	1.7	0.9	0.7	1.1	0.8*	0.6	1.0
Three	1.5*	1.2	2.0	0.9	0.7	1.1	0.8*	0.6	1.0
Four	1.9*	1.5	2.6	0.8	0.6	1.1	0.5*	0.4	0.7
Five	2.0*	1.4	2.9	0.8	0.6	1.1	0.4*	0.2	0.6
Six or more	1.7*	1.2	2.5	0.8	0.5	1.1	0.3*	0.2	0.6
Positive social interaction social support	1.03*	1.01	1.05	0.81*	0.79	0.82	0.90*	0.88	0.91
Tangible social support model									
Number of frequent social activities									
None†	1.0	…	…	1.0	…	…	1.0	…	…
One	1.0	0.9	1.2	0.7*	0.6	0.9	0.9	0.7	1.0
Two	1.4*	1.1	1.7	0.7*	0.6	0.9	0.7*	0.5	0.8
Three	1.6*	1.2	2.0	0.7*	0.5	0.9	0.7*	0.5	0.9
Four	2.0*	1.5	2.6	0.5*	0.4	0.8	0.4*	0.3	0.6
Five	2.0*	1.4	2.9	0.6*	0.4	0.8	0.3*	0.2	0.5
Six or more	1.8*	1.2	2.5	0.5*	0.4	0.8	0.3*	0.2	0.5
Tangible social support	1.02*	1.00	1.04	0.85*	0.84	0.86	0.92*	0.90	0.93
Emotional or informational social support model									
Number of frequent social activities									
None†	1.0	…	…	1.0	…	…	1.0	…	…
One	1.0	0.9	1.3	0.8*	0.6	1.0	0.9	0.7	1.1
Two	1.4*	1.1	1.7	0.8*	0.6	0.9	0.7*	0.6	0.9
Three	1.6*	1.2	2.0	0.7*	0.6	0.9	0.7*	0.5	0.9
Four	2.0*	1.5	2.7	0.6*	0.4	0.9	0.5*	0.3	0.6
Five	2.0*	1.4	2.9	0.7*	0.5	0.9	0.3*	0.2	0.5
Six or more	1.8*	1.2	2.6	0.6*	0.4	0.9	0.3*	0.2	0.5
Emotional or informational social support	1.01*	1.00	1.02	0.92*	0.91	0.92	0.95*	0.95	0.96
Affection social support model									
Number of frequent social activities									
None†	1.0	…	…	1.0	…	…	1.0	…	…
One	1.1	0.9	1.3	0.8	0.7	1.0	0.9	0.7	1.1
Two	1.4*	1.2	1.7	0.7*	0.6	0.9	0.7*	0.6	0.9
Three	1.6*	1.2	2.0	0.7*	0.6	0.9	0.7*	0.5	0.9
Four	2.0*	1.5	2.6	0.6*	0.5	0.9	0.5*	0.3	0.7
Five	2.1*	1.4	3.0	0.7*	0.5	0.9	0.3*	0.2	0.5
Six or more	1.8*	1.3	2.6	0.6*	0.4	0.9	0.3*	0.2	0.5
Affection social support	1.02	1.00	1.05	0.78*	0.76	0.80	0.87*	0.85	0.89

† reference group
* signficantly different from reference group ($p<0.05$)
... not applicable
Note: Each model also controls for age (continuous), sex, household income, education, retirement status, disability, and behavioural risk factors.
Source: 2008/2009 Canadian Community Health Survey—Healthy Aging.

Table 3
Percentage reporting desire to have participated in more social activities in past 12 months, by age group and factors preventing particpation, household population aged 65 or older, Canada excluding territories, 2008/2009

	Men			Women		
		95% confidence interval			95% confidence interval	
	%	from	to	%	from	to
Total	**20.7**	**19.1**	**22.2**	**26.6‡**	**25.1**	**28.2**
Age group						
65 to 74†	22.0	19.9	24.1	29.9‡	27.5	32.3
75 to 84	19.3	16.8	21.8	24.0*‡	21.9	26.1
85 or older	16.8*	13.8	19.8	19.8*	17.0	22.5
Factors preventing more social participation						
Health condition/limitation	33.0	29.4	36.5	34.8	31.9	37.6
Too busy	28.4	24.6	32.2	16.2‡	13.7	18.7
Personal/Family responsibilities	10.1	7.2	13.0	10.4	8.0	12.7
Don't want to go alone	9.0	6.8	11.3	16.7‡	14.3	19.2
Cost	7.6	4.8	10.3	8.6	6.4	10.7
Activities not available in area	7.0	5.2	8.8	8.0	6.4	9.7
Time of activities not suitable	6.7	5.0	8.5	8.1	6.2	10.1
Location too far	4.2	2.5	5.9	5.6	4.0	7.2
Transportation problems	3.7	2.2	5.1	11.2‡	9.3	13.1
Other	16.0	13.1	18.9	14.0	12.0	16.1

† reference group
* signficantly different from reference group (p<0.05)
‡ signficantly different from men (p<0.05)
Source: 2008/2009 Canadian Community Health Survey—Healthy Aging.

What is already known on this subject?

- Epidemiological studies have established social participation as a factor associated with positive health outcomes for seniors.
- A possible mechanism by which social participation is associated with health is through the social support gained by relationships with other people.

What does this study add?

- Based on recent data, the majority of Canadian seniors were frequent participants in at least one type of social activity
- Greater social participation was positively associated with self-perceived health and negatively associated with loneliness and life dissatisfaction.
- Social support was a mediating factor in these associations, corroborating the hypothesis that the quality of social relationships is an important aspect of how social participation is associated with health.
- Frequent barriers to social participation included health limitations, being too busy, personal or family responsibilities, and not wanting to go alone to activities.

Discussion

The results of this study support other research,[2-14] in that social relationships were shown to be significantly associated with health and well-being independent of socio-demographic and health factors. In earlier research, each outcome examined in this study—self-perceived health,[25] loneliness,[26] and life dissatisfaction[27]—has been linked to poor health and mortality.

While the optimal amount of social participation depends on the individual, a gradient, or dose-response relationship, appears to exist. The greater the number of frequent social activities, the higher the odds of positive self-perceived health, and the lower the odds of loneliness and life dissatisfaction. This is consistent with research that has found seniors with a wider range of social ties have better well-being.[28]

The associations between social participation and health and well-being were attenuated, but persisted, when socio-demographic and health factors were controlled. When social support was included in the models, the associations were further attenuated, but generally remained. However, when positive social interaction was taken into account, the association between frequent social participation and loneliness was no longer significant.

The elements in the positive social interaction dimension of social support (has someone to have a good time with, get together with for relaxation, do things with to get his/her mind off things, or do something enjoyable with) seem closely aligned with social participation. However, social participation and the positive social interaction dimension of social support were only mildly correlated (Pearson correlation 0.20), indicating that multicollinearity does not account for the finding. This indicates that the measure of interaction used here (number activities in which one frequently participates) and the perceived availability of positive social interaction are not interchangeable concepts.

Some research suggests that it is the quality, not the size, of social networks that matters for the relationship with health and well-being.[2,9,29-32] In this study, dimensions of perceived social support were used to approximate the quality of social interactions. The fact that social support partially or completely mediated the associations, and that individual dimensions of social support were, themselves, independently associated with measures of health and well-being, corroborates this hypothesis.

The strong associations between social participation and health and well-being emphasize the importance of addressing the barriers faced by the nearly one-quarter of seniors who reported a desire to participate in more social activities.

Limitations

Because this is a cross-sectional study, the possibility of reverse causality cannot be ruled out; that is, people in poor health may be unable to maintain social participation, and those who participate frequently may be in better health. Nonetheless, the relationship between social participation and health and well-being persisted even after accounting for functional health status. Some longitudinal studies have found similar results.[33,34]

People who are not healthy may still benefit from social participation, perhaps more so. However, tests for interaction effects between level of disability and social participation in models of health and well-being outcomes were not significant in this analysis (data not shown). It is also likely that there are reciprocal effects between social participation and health and well-being,[2] such that better health allows for greater social participation, which, in turn, improves or maintains health, allowing for the maintenance or increase in the level of social participation.

Seniors in care institutions were excluded from the survey. However, results were similar in a study of institutionalized seniors.[35] Specifically, seniors who participated in social and recreational activities were more likely than those who did not participate in such activities to report positive self-perceived health.

The types of social activities about which respondents to the survey were asked did not include the internet or social media. Seniors' use of the internet tends to be for communication,[36] and has been associated with lower levels of loneliness.[37] Exclusion of online activity from this study may underestimate seniors' social participation, and also, the extent of associations between social participation and health and well-being.

Conclusion

According to the 2008/2009 Canadian Community Health Survey—Healthy Aging, four-fifths of seniors were frequent participants in social activities. The results of this analysis highlight the importance of frequent social participation to maintaining quality of life. Of particular relevance to policy and program development are the reported barriers to seniors' social participation. In addition to the frequency of social participation, future research could focus on seniors' satisfaction with social participation and longitudinal associations with health and well-being. ■

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Appendix

Table A
Percentage distribution of selected characteristics, household population aged 65 or older, Canada excluding territories, 2008/2009

Characteristics	%
Total	**100.0**
Number of frequent social activities	
None	20.4
One	23.3
Two	19.4
Three	14.4
Four	10.4
Five	6.5
Six or more	5.6
Age group	
65 to 74	55.1
75 to 84	33.6
85 or older	11.2
Sex	
Men	45.1
Women	54.9
Household income	
Lowest	33.9
Low-middle	27.7
Middle	17.6
High-middle	12.1
Highest	8.7
Education	
Less than secondary graduation	41.3
Secondary graduation	15.4
Some postsecondary	4.6
Postsecondary graduation	38.6
Retirement status	
Retired	87.6
Not completely retired	12.4
Disability	
None	7.9
Mild	45.8
Moderate	19.5
Severe	26.8
Risk behaviours	
None	36.9
One	51.2
Two	11.1
Three	0.9
Social support	
Low positive social interaction	32.9
High positive social interaction	67.1
Low tangible	37.3
High tangible	62.7
Low emotional/Informational	40.2
High emotional/Informational	59.8
Low affection	37.8
High affection	62.2

Source: 2008/2009 Canadian Community Health Survey—Healthy Aging.