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Satisfaction with Life of Older Men and Women in the Canadian Longitudinal Study on Aging (CLSA) and its Association with Formal and Informal Home Care

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Article

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Abstract

Background. Home care aims to reduce harmful effects of poor health and increase well-being.
Objective. We studied whether receiving formal or informal home care was associated with changes in satisfaction with life (SwL).
Methods. The study includes people aged 70+ who participated in the Canadian Longitudinal Study on Aging (CLSA) at baseline and three-year follow-up. Linear regression models adjusted for individual factors were used to examine the relationship between home care and changes in SwL at two time points.
Results. Receiving home care was associated with declining SwL. The association was different for formal and informal care, and to some extent, for men and women. Changes in health mainly explained the association of SwL with formal but not informal care.
Discussion. The connection between home care and declining SwL suggests that some people's needs are not met, especially by informal care, which negatively affects life satisfaction. This finding deserves more attention when planning home-based care.

Résumé

Les soins à domicile visent à réduire les effets néfastes d'une mauvaise santé et à accroître le bienêtre. Nous avons cherché à déterminer si le fait de recevoir des soins à domicile formels ou informels était associé à des changements dans la satisfaction de vie (SV). L'étude porte sur des personnes âgées de plus de 70 ans qui ont participé à l'Étude longitudinale canadienne sur le vieillissement (ÉLCV), et dont les données ont été recueillies au début de l'étude et trois ans après. Des modèles de régression linéaire ajustés aux facteurs individuels ont été utilisés pour examiner le lien entre les soins à domicile et la variation de la satisfaction de vie à deux moments donnés. Le fait de recevoir des soins à domicile a été associé à une diminution de la SV. Le lien était différent pour les soins formels par rapport aux soins informels et, dans une certaine mesure, pour les hommes par rapport aux femmes. L'évolution de l'état de santé explique principalement la corrélation de la SV avec les soins formels, mais non avec les soins informels. Le lien entre les soins à domicile et la baisse de la SV suggère que ces soins, en particulier les soins informels, ne suffisent pas à combler les besoins de certaines personnes, ce qui influe négativement sur leur satisfaction de vie. Cette constatation mérite une plus grande attention au cours de la planification des soins à domicile.

Introduction

When an older person's health and functioning deteriorate, the need for help and care to cope with daily life at home increases. This help can come from family and friends as an informal source of care, or it can come through paid services, generally referred to as formal home care. The aim of home care is to reduce the adverse effects of poor health and improve health and quality of life at home (Government of Canada, 2016). When health deteriorates, life satisfaction may also deteriorate due to the well-established link between health and life satisfaction (Martyr et al., 2018; Abdul Rahman et al., 2022; Borg et al., 2006). Life satisfaction refers to an overall assessment of feelings and attitudes about one's life and is a major indicator of well-being (Beutell, 2006).

Receiving home-based care and satisfaction with life

Many healthcare systems have policies that promote aging-in-place, emphasizing care for older people at home rather than in institutions or other care facilities. This underlines the importance of understanding the relationship between receiving formal or informal care and life satisfaction. In Canada, formal home care consists of home health care (nursing care, other health care services, help with medical equipment, and palliative care) and home support care (personal needs such as bathing, housekeeping, meal preparation, and other services such as transportation and meals on wheels) (Gilmour, 2018a). Informal care refers to care carried out by family members, relatives, or friends. While satisfaction with life (SwL) among older people has been studied from various perspectives, the specific connection between informal care or formal home care and older people's life satisfaction is not well understood.

With respect to informal care, expectations of care provided by family members are positively associated with life satisfaction prior to receiving care (Kim & Yoon, 2022). However, receipt of informal care is associated with poorer life satisfaction (Ouyang et al., 2019) and with a decline in well-being even when accounting for other factors that might explain this, such as morbidity and functioning (Zwar et al., 2019). However, a study by Zwar et al. (2020) shows that receiving informal care was associated with increased self-esteem for some care recipients. Furthermore, according to Bo & Lei (2020), receiving informal care may prevent functional decline.

Older adults in Canada who received only formal home care reported better life satisfaction and wellbeing than respondents who received informal care only or a blend of formal and informal home care (Lee et al., 2020). The interpretation of these results may be that those using formal home care services rely less heavily on their family, friends, and neighbours, reinforcing their life satisfaction and reducing the possible feeling of being a burden for family members (Lee et al., 2020). However, in the Netherlands, older women (but not men) who received formal home care were less satisfied with life than women who received informal care only (Boumans & Deeg, 2011).

Satisfaction with life and differences between older men and women

Although there is similarity in the predictors of life satisfaction between men and women, there are also differences related to different life situations. First, age is connected to the difference between the sexes in life satisfaction. Older men are more likely to report higher life satisfaction than women, but among younger cohorts, the results are often the opposite (Joshanloo & Jovanović, 2020). In Canada, 89.6 per cent of men and 90.6 per cent of women aged 65 and older reported being satisfied or very satisfied with their lives (Statistics Canada, 2021), implying a high SwL among older men and women in Canada.

Second, health is a crucial predictor of life satisfaction (Moreno-Agostino, Abad & Caballero, 2022) as poor physical and mental health and poor general self-reported health are associated with poorer quality of life (Martyr et al., 2018) and lower SwL (Borg et al., 2006; Tavares, 2022). Of Canadians who reported excellent or very good health, nearly all (98.1%) were satisfied or very satisfied with their lives, while of those who reported fair or poor health, about two-thirds (63.6%) were satisfied or very satisfied (Statistics Canada, 2017). The connection between health and life satisfaction exists in both men and women (Moreno-Agostino, Abad & Caballero, 2022), and it can be based on both biological sex and socially constructed gender. Although women live longer than men, older women more often report health problems (Carmel, 2019) that can reduce life satisfaction, such as depression (Becchetti & Conzo, 2022). According to Ní MhaoláinNi et al. (2012), the key determinants of life satisfaction among older people are closely related to mental health variables such as being depressed (Rissanen et al., 2011) and reporting higher levels of subjective exhaustion.

Third, social and economic factors can also be behind the differences in life satisfaction between men and women. These underlying factors are based more on gender-based social norms, roles, and culture than biological sex, and can often be linked to generational experience as well. Among people aged 80 and older, SwL was associated with a partnership relationship (Wilhelmson et al., 2013). Expressing increasing feelings of loneliness is associated with weakening life satisfaction (Ní Mhaoláin et al., 2012). In addition, lower life satisfaction is associated with insufficient financial resources (Borg et al., 2006; Tavares, 2022). As women are at higher risk of being widowed and having lower material resources (Joshanloo & Jovanović, 2020), these factors could partly explain their lower life satisfaction compared to men in old age.

Factors such as age, sex, illness, functional decline, and social circumstances that are associated with life satisfaction are also related to the need and use of different health and long-term care services (Andersen & Newman, 2005; Pot et al., 2009; Swinkels et al., 2016). Thus, the factors that increase the need for care may also decrease life satisfaction, meaning that changes in these factors are linked to the changes in the need for and receipt of care and life satisfaction. Therefore, we consider these individual determinants and characteristics related to the need for care and life satisfaction in this study.

We use longitudinal data from the Canadian Longitudinal Study on Aging (CLSA;Raina et al., 2009) to examine how the use of or transition to receipt of informal or formal home care among older men and women in Canada is related to life satisfaction. Since the predictors of life satisfaction are partly different in older men and women, based on both biological sex and more culturally and socially formed gender, the association of receipt of care at home with life satisfaction may also differ between men and women. Thus, the analyses are performed separately between the sexes. The extensive data included in the CLSA allow us to consider these several individual factors of health and illness, social resources, and socioeconomic factors, all of which potentially contribute to care needs and SwL. The relationship between life satisfaction and receipt of home care is ideally studied using longitudinal data that can help to reveal potential causal relationships. Using longitudinal data, we contribute to the knowledge of older people's SwL and study how changes in the receipt of home care are connected to life satisfaction when we also take into account the individual factors that may affect both care needs and life satisfaction. We will answer the following research questions:

1. To what extent is SwL associated with the receipt of formal or informal care in men and women?
2. To what extent are the changes in receipt of informal and formal care at home associated with changes in SwL after controlling for health-related, socioeconomic, and other individual factors related to social resources, and how theses possible associations differ between men and women?

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Data and methodology

The study employs interview and questionnaire responses from the baseline (collected in years 2011–2013) and the first follow-up (2015–2018) of the CLSA. The CLSA includes a national, stratified, random sample of over 51,000 Canadian women and men aged 45 to 85 years at the time of recruitment. Approximately 30,000 of these participants provided data through in-home interviews and data collection site visits, and about 21,000 were contacted through telephone interviews. (More information about CLSA data collections and protocol can be found at https://www.clsa-elcv.ca/data-collection and https://www.clsa-elcv.ca/researchers.) Our study population included those who were 70 or older at baseline and participated in the three-year follow-up (n = 11,282). The age limit of 70 was chosen as the receipt of home care is less common among younger ages (e.g., Vafaei et al., 2023), and we also considered the aging of the study population during the follow-up period.

The outcome variable satisfaction with life

The CLSA dataset contains the satisfaction with life scale (SwLS) (Diener et al., 1985) that includes five statements: 1) life is close to my ideal; 2) the conditions of my life are excellent; 3) I am satisfied with my life; 4) I have gotten the important things I want in life; and 5) if I could live my life over, I would change almost nothing. Responses use a scale that ranges from 7 (strongly agree) to 1 (strongly disagree). An overall score is the sum of responses to these five statements and ranges from 5 to 35, with higher scores indicating greater SwL: 31–35 extremely satisfied; 26–30 satisfied; 21–25 slightly satisfied; 20 neutral; 15–19 slightly dissatisfied; 10–14 dissatisfied; and 5–9 extremely dissatisfied (CLSA, 2021). If any of the five individual items were missing, this score was set to missing. We created a variable describing the change in SwL based on the difference between baseline and follow-up. This variable was used as a dependent variable in the analysis; below zero means decreased life satisfaction, above zero improved life satisfaction, and zero means no change between the baseline and follow-up. All variables are listed in Appendix 1.

Independent variables

Care variables

The CLSA data include binary variables indicating receipt of either short-term or long-term informal care (provided by family, friends, or neighbours) or formal home care (professional assistance) during the past 12 months because of a health condition or limitation that affected the respondent's daily life (0 = no care, l = yes short- and/or long-term care) (CLSA, 2021). To examine the change in receipt of informal care or formal home care separately, we created two variables that categorize the possible changes in receiving either informal care or formal home care. We created two variables, one describing the change in formal and the other in informal care. They were categorized as follows: 0 = did not receive care at baseline and at follow-up; 1 = did not receive care at baseline and received care at follow-up; 2 = received care at baseline and but not at follow-up; and 3 = received care at baseline and follow-up.

Health variables

Chronic conditions are identified through such questions as, 'Has a doctor ever told you that you have (the name of the condition or illness)'? Chronic conditions included in this study are: heart conditions (congestive heart failure or chronic heart failure); cancer; peripheral vascular disease (PVD, including poor circulation in limbs); memory disorder (dementia, Alzheimer's disease, or memory problems); ulcer (intestinal or stomach ulcers); bowel disorder (Crohn's Disease, ulcerative colitis, or Irritable Bowel Syndrome); mood disorder (bipolar disorder, mania, or dysthymia, anxiety, depressive syndromes); kidney disease; osteoarthritis (hand, hip, or knee); chronic obstructive pulmonary disease (COPD); back pain; stroke; osteoporosis; Parkinson's disease (including Parkinsonism); diabetes (borderline diabetes or blood sugar is high); and depression. A variable summing the number of chronic conditions (0–14) was created based on these diagnoses, excluding depression. Because depression is found to be associated with SwL (e.g., Gigantesco et al., 2019), it was used as a separate factor. We also created a four-category variable for change in depression status: 0 = not at baseline and follow-up; 1 = not at baseline, yes at follow-up; 2 = yes at baseline, not at follow-up; and 3 = yes at baseline and follow-up.

An activity of daily living (ADL) variable categorizes the respondent's need for help with activities in daily living (ADLs) or instrumental activities in daily living (IADLs). The variable is one of the CLSA's derived variables (ADL_DCLST_TRM) and is described as follows as a variable that categorizes the respondent's ability to perform activities of daily living based on the number of times they indicated that they need help with an activity or that they are completely unable to do an activity in the ADL and IAL modules, excluding the questions regarding meal preparation ability (CLSA, 2021). The classification values range from 0 to 4 with 0 indicating no problems performing activities of daily living and 4 indicating complete inability to perform activities of daily living. The ADL score was added to models as a continuous variable.

We created four new variables to capture change in the number of chronic conditions, ADL functioning, income, and having someone to talk to. These were calculated as the simple difference between scores at baseline and follow-up.

Other independent variables

The question about sex/gender is asked with the question, *Are you male or female?* Thus we treated the response as a binary sex categorization. Age at baseline and the number of living children were used as continuous variables, while education, marital status, income, informal caregiver status, and having someone to talk to were included as categorical variables in the models. Income is the estimate of the total household income received by all household members, from all sources, before taxes and deductions, in the past 12 months. Informal caregiver status was measured as a binary variable through a question of whether the respondent had assisted another person because of a health condition or limitation during the past 12 months. Social support was measured by whether the person had someone to count on to listen when s/he needed to talk.

An additional variable to indicate change in marital status at baseline and in follow-up was coded as: 0 = partner present, partner present; l = partner present, partner absent; 2 = partner absent, partner present; 3 = partner absent, partner absent (similar categorization in Chipperfield & Havens, 2001). Because a person can simultaneously receive home care and provide informal help to someone else, we created a four-category variable was generated for change in informal caregiver status: 0 = not at baseline and follow-up, 1 = not at baseline, yes at follow-up, 2 = yes at baseline, not at follow-up, 3 = yes at baseline and follow-up.

Statistical analysis

Descriptive statistics were used to characterize the population of women and men at baseline and at first follow-up. Next,

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multinomial logistic regression examined the association between SwL and the use of informal and formal home care at baseline. Tests for multicollinearity included correlation coefficients, variance inflation factor (VIF) values, and coldiag2; no multicollinearity was observed. The analyses were conducted with Stata 16 (StataCorp., 2019). The CLSA analytical weights were employed for the regression analyses (CLSA, 2021).

According to Pavot and Diener (1993), SwLS can show stability over time, perhaps due to the stability in personality and stable life circumstances. However, immediate factors, such as current mood and situational context, are likely to affect an individual's response to questions about life satisfaction (Pavot & Diener, 1993). Becoming a home care recipient is often preceded by declining health and functional capacity, which changes life circumstances. Furthermore, receiving home care and thus becoming dependent on other people changes life circumstances even more. Thus, a change in care recipient status indicates a major change in life circumstances. Hence, we wanted to detect clear changes and minimize the effect of such minor changes in the score. In our data, the primary outcome variable, SwL score, was highly skewed towards higher scores. Due to the research aim and the data skewness, we decided to categorize the SwL score the way it clearly distinguishes the categories from each other. The scores that described dissatisfaction (5–19) were rare in our data, constituting less than ten per cent of the responses of the whole study group. To guarantee statistical power and to keep the SwL categories as balanced as possible in size, we categorized dissatisfied into one group (0 = dissatisfied, score range 5–19). However, we followed a different logic with the category satisfied, as the responses slightly satisfied, satisfied, and extremely satisfied constituted about 90 per cent of the study population. As the score of 20 represents the neutral point of the scale, the point at which the person is about equally satisfied or dissatisfied, we combined this middle category with slightly satisfied (1 = neutral or slightly satisfied, score range 20–25), and the remaining as 2 = satisfied or extremely satisfied (26–35) to represent those people who are truly satisfied with their lives.

Multinomial logistic regression analysis was used for analysis. First, we fitted three univariate models that included each of the primary explanatory variables of sex, use of informal care, and the use of formal home care plus age. Next, these same variables were fitted in a single model. The third model includes all variables in Model 2 plus variables describing health. Model 4 included all variables from Model 3 plus social resources, socioeconomic status, and informal caregiver status. Next, the models were run for men and women separately. Relative risk ratios (RRR) with their 95 per cent confidence intervals (Cl) were reported for all models.

To examine the relationship between the change in SwL score and the change in receiving care, we fitted a linear regression model adjusted for different individual factors. Assumptions of normality and homoscedasticity of residuals were met. The analysis proceeded as earlier; first, care variables were included in the models with age; next, health-related variables; and in the final model, socioeconomic factors and social resources were included. Sex-stratified analyses to capture the different effects for men and women.

Results

The average age at baseline was 76 years (Table 1). Females accounted for more than half of the respondents. At baseline, about 79 per cent estimated their life satisfaction as good or extremely high, 14 per cent as neutral or slightly positive, and less than 8 per cent as dissatisfied (Table 1). In baseline and follow-up observations, women were more often dissatisfied with life or neutral than men. Between the baseline and follow-up, the proportion of women and men in groups dissatisfied and neutral increased slightly while the proportion of satisfied decreased. Women received both informal care and formal home care more often than men at the baseline and follow-up. The proportion of men and women receiving informal or formal home-based care increased between baseline and follow-up.

Satisfaction with life and the use of formal and informal care

The receipt of informal care or formal home care was related to dissatisfaction and neutral or slightly satisfied instead of being satisfied/extremely satisfied with life (Table 2, Model 1). These associations remained in Model 2 when age, sex, and both types of care were included in the analysis but disappeared after adjusting for health variables in Model 3. The result remained non-significant after adding variables describing social factors to the model (Model 4).

Next, the association between SwL and the receipt of informal or formal home care at one time point, baseline, was studied separately for men and women (Figures 1 and 2). When informal or formal home care was added to the model separately (Figures 1 and 2, Model 1), and together with age (Model 2), both women and men who received informal care or formal home care had higher odds of belonging to the groups dissatisfied and neutral instead of satisfied/extremely satisfied. After adding the variables describing health, that is, ADL, the number of chronic conditions, and depression (Model 3), women receiving formal home care and men receiving informal care had higher odds of being dissatisfied than satisfied with their life. This suggests that health status explained some of the dissatisfaction associated with receiving home care. Adding information on social resources and sociodemographic factors to Model 4 did not change these results.

The relationship between the changes in the use of informal and formal home care and the changes in satisfaction with life

Next, we examined how changes in receipt of informal and formal care were related to changes in life satisfaction for men and women separately. We added both care types to the model (Table 3 Model 1). For women, both starting to receive informal care or formal home care and continuing to receive informal care were related to decreased life satisfaction. Adding health variables and social and socioeconomic factors did not change the results for informal care. Other variables with a statistically significant connection with the decline in SwL were the decrease in functional ability (ADL) and the onset of or continuing depression. Increased income was associated with increased SwL among women.

Similarly, starting to receive formal home care was related to a decline in SwL among men (Table 3, Model 1), as was starting or continuing to receive informal care. However, only starting to receive informal care remained significant after adding health-related factors (Model 2) and social resources (Model 3). In the final model, depression at the follow-up, the decline in ADL functioning, and the increase in chronic conditions were all related to a decline in life satisfaction; improvements in ADLs were related to an increase in life satisfaction. Interestingly, any changes in either direction in having someone to talk to were associated with decreased life satisfaction for men.

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Table 1. Data description. Study population: people aged 70+ (*N* 11282) who responded to baseline and follow-up

		Baseline		Follow-up	
	Baseline total	Women	Men	Women	Men
%		54.3	45.7	54.3	45.7
Satisfaction with life scale (SwLS) score, range 5–35 (mean)*	29.0	28.5	29.6	28.4	29.4
SwLS*					
Dissatisfied (5–19)	7.5	8.9	6.0	10.0	6.6
Neutral or slightly satisfied (20–25)	13.8	15.5	11.7	15.8	13.2
Satisfied or extremely satisfied (26–35)	78.7	75.6	82.3	74.2	80.2
SwLS score, change (mean)*	–	–	–	−0.14	−0.24
Age, mean*	75.9	76.1	75.7	79.9	79.5
Use of informal care*	12.9	15.8	9.4	28.7	17.4
Use of formal care*	8.9	10.9	6.5	22.6	15.5
Caregiver*	41.4	42.5	40.3	49.2	45.4
Activity of daily living (ADL), mean*	0.2	0.3	0.1	0.5	0.2
Chronic conditions, mean*	2.0	2.2	1.8	2.5	2.1
Depression*	15.8	20.1	10.6	22.7	14.5
Marital status*					
Single	4.3	5.5	2.9	5.9	3.5
Married/living with a partner	64.1	49.2	81.9	43.4	78.2
Widowed/divorced/separated	31.6	45.3	15.2	50.6	18.3
Number of children (mean)	2.9	2.9	2.9	2.9	2.9
Education*					
Less than secondary	13.8	15.7	11.6	15.7	11.6
Secondary degree	12.3	14.0	10.3	14.0	10.3
Some post-secondary	7.9	8.7	6.9	8.7	6.9
Post-secondary degree	66.0	61.6	71.3	61.6	71.3
Income*					
< 20,000	7.1	11.0	2.7	10.5	2.8
20,000–49,999	40.8	48.7	32.1	44.9	30.0
50,000–99,999	37.5	31.7	44.1	32.8	44.5
100,000–149,999	9.8	6.0	14.0	7.0	14.2
≥150,000	4.8	2.7	7.2	2.9	8.5
Has someone to talk to*					
Never/seldom	4.1	3.6	4.7	4.9	5.6
Sometimes/usually	36.4	37.1	35.6	41.0	36.7
Always	59.5	59.4	59.7	54.1	57.7

*The difference between women and men, $p < 0.05$.
Percentages and means are computed using the trimmed weights provided by Canadian Longitudinal Study on Aging (CLSA) (see CLSA technical document).

Discussion

Our research shows that receiving informal and formal home care was associated with lower life satisfaction in both men and women. In addition to exploring the relationship at one time point, we used data with baseline and follow-up observations and studied the changes in SwL between these two time points and their association with home care use. Our results showed worsening health conditions mainly explained the connection between use of formal home care and decreased life satisfaction. However, these health variables did not explain the relationship between informal care and decreased life satisfaction.

The result suggests that in the case of formal home care, the same factors that increase the care needs mainly explain the reduction in SwL. This suggests that maintaining health not only reduces the need for formal care but also helps maintain better life satisfaction. Ní Mhaoláin et al. (2012) suggest that policies aimed at fostering older adults' life satisfaction by focusing on health enhancement and maintenance could be beneficial in terms of life

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Table 2. Relative risk ratios (RRR) with their 95% confidence intervals (CI) from multinomial logistic regression models (in bold when statistically significant) for the association between the explanatory variables and the SwL at baseline, satisfied / extremely satisfied being the base group for outcome. Model 1 is a univariate model. Model 3 includes all the variables from Model 2, and Model 4 includes all variables from Model 3

	Not satisfied RRR	95% CI	Neutral RRR	95% CI
Models 1				
Male	**0.61**	**0.53, 0.71**	**0.66**	**0.59, 0.74**
Age	0.99	0.97, 1.01	1.01	0.99, 1.02
Formal home care	**2.60**	**2.12, 3.17**	**1.63**	**1.37, 1.94**
Informal care	**2.24**	**1.88, 2.68**	**1.59**	**1.36, 1.84**
Model 2				
Male	**0.65**	**0.56, 0.76**	**0.68**	**0.61, 0.76**
Age	0.98	0.96, 1.00	1.00	0.99, 1.01
Formal home care	**2.05**	**1.65, 2.56**	**1.38**	**1.14, 1.66**
Informal care	**1.78**	**1.46, 2.16**	**1.40**	**1.19, 1.63**
Model 3 (Model 2 + health factors)				
Male	**0.81**	**0.69, 0.96**	**0.77**	**0.69, 0.87**
Formal home care	1.21	0.94, 1.57	1.02	0.83, 1.27
Informal care	1.18	0.94, 1.49	1.12	0.94, 1.33
Activity of daily living (ADL)	**1.43**	**1.20, 1.70**	**1.21**	**1.05, 1.40**
Number of chronic conditions	**1.24**	**1.18, 1.31**	**1.12**	**1.08, 1.16**
Depression	**6.50**	**5.44, 7.75**	**3.25**	**2.81, 3.76**
Model 4 (Model 3 + social factors)				
Male	0.89	0.75, 1.11	0.89	0.78, 1.02
Formal home care	1.17	0.89, 1.54	0.97	0.77, 1.22
Informal care	1.24	0.97, 1.58	1.15	0.96, 1.38
Caregiver, yes	0.90	0.76, 1.07	0.99	0.87, 1.12
Marital status (single ref)				
Married / living with a partner	0.73	0.49, 1.09	0.88	0.65, 1.18
Widowed / divorced /separat.	1.06	0.72, 1.55	1.24	0.93, 1.65
Number of children	**0.95**	**0.90, 0.99**	0.96	0.93, 1.00
Education (ref. low)				
Secondary degree	1.26	0.89, 1.77	1.15	0.90, 1.47
Some post-secondary	1.22	0.83, 1.80	1.23	0.93, 1.61
Post-secondary degree	1.23	0.93, 1.62	1.07	0.88, 1.30
Income (ref. under 20, 000)				
20,000–49,999	**0.58**	**0.44, 0.76**	0.92	0.73, 1.15
50,000–99,999	**0.45**	**0.33, 0.62**	**0.75**	**0.59, 0.97**
100,000–149,999	**0.32**	**0.21, 0.49**	**0.57**	**0.42, 0.79**
≥ 150,000	**0.37**	**0.22, 0.64**	0.77	0.54, 1.11
Has someone to talk to (ref. never or rarely)				
Sometimes or often	**0.32**	**0.23, 0.43**	0.78	0.58, 1.06
Always	**0.21**	**0.15, 0.29**	**0.54**	**0.40, 0.73**

Analyses are computed using 'analytical' weights provided by Canadian Longitudinal Study on Aging (CLSA) (see the CLSA technical document).

satisfaction. Depression was an important condition explaining lower life satisfaction in men and women, a result also found in previous studies (Gigantesco et al., 2019; Rissanen et al., 2011). In addition, Boumans and Deeg (2011) suggest that becoming dependent on formal home care may be related to sense of loss, difficulties in coping and adapting to the new life situation, and an ability to influence the decisions about their home help (Janlöv et al., 2006).

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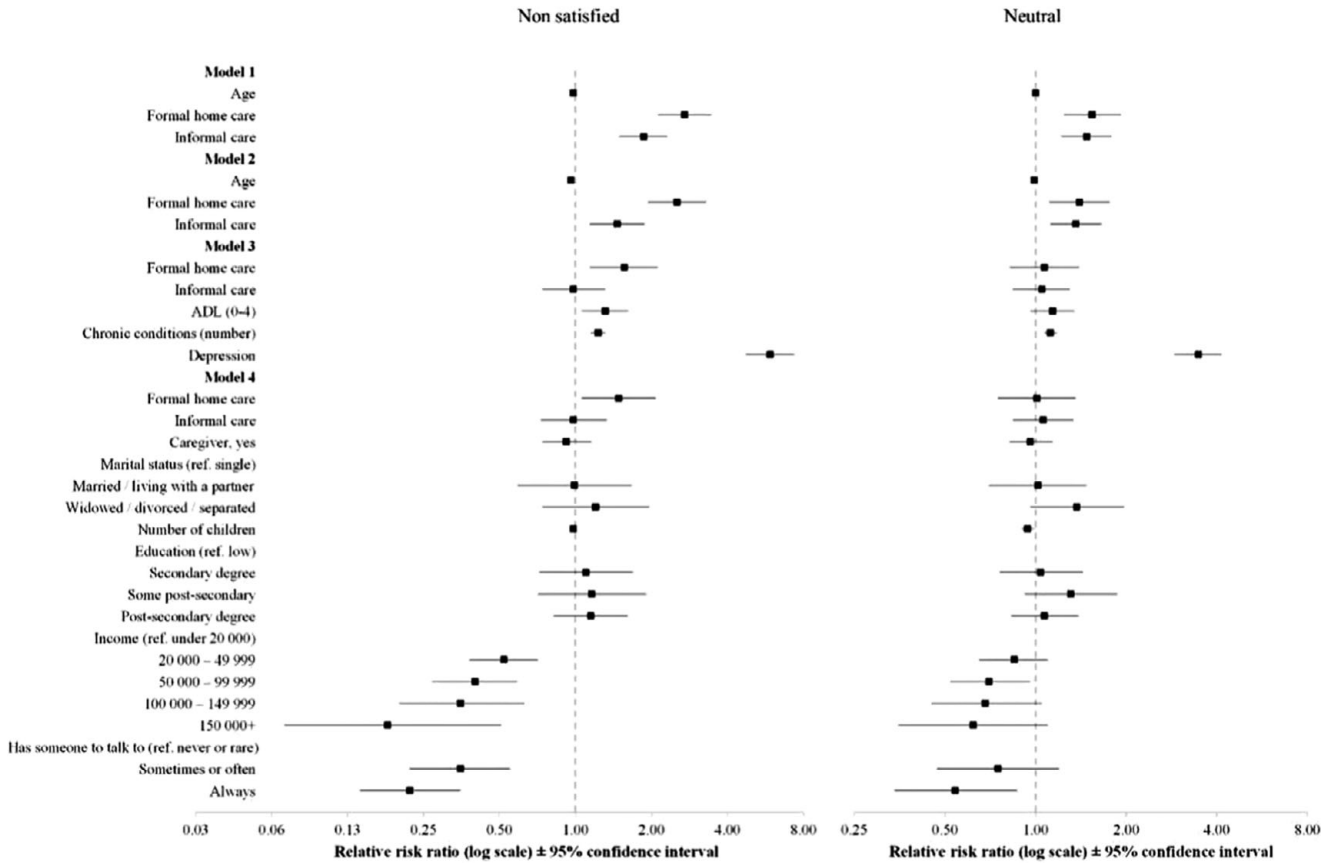

Figure 1. Relative risk ratios (RRR) with 95% confidence intervals (CI) for women from multinomial logistic regression models for the association between the explanatory variables and the SwL at baseline, satisfied / extremely satisfied being the base group for the outcome. Model 3 includes all the variables from Model 2, and Model 4 includes all variables from Model 3. Analyses are computed using 'analytical' weights provided by Canadian Longitudinal Study on Aging (CLSA) (see the CLSA technical document).

At the same time, changes in health status or other life events did not explain why starting to receive informal care was associated with decreased life satisfaction in both men and women. For women, starting or continuing to receive informal care, and for men starting to receive informal care, were associated with decrease in SwL when health, sociodemographic, and social factors were taken into account. The results suggest that in the case of informal care, the change in life satisfaction is something that is not entirely explained by those same factors that increase the need for care. When faced with health problems, people use different coping strategies, which in turn are related to their life satisfaction. These coping strategies vary by age and gender (Pereira et al., 2018). Receiving care can be considered as one type of coping strategy. However, it differs from active strategies such as planning, acceptance, and humour strategies (Pereira et al., 2018) in the sense that a person becomes dependent on another person when needing and receiving care. Life satisfaction is related to a person's ability to cope independently in life (Good et al., 2008). Zwar et al. (2019) argue that the negative association with moving from a non-recipient to a recipient of informal care can be explained by care recipients' perceived inability to manage their own lives due to receiving informal care and the increasing dependence on relatives or friends who provide the care. As a person starts to need informal help, dependence on another person increases (Lee et al., 2020), and, for example, in spousal care, the relationship may become more of a caring relationship instead of equal couplehood, or family roles can change, which may be experienced as the negative consequences of informal care (Andréasson, Mattsson & Hanson, 2021).

Life satisfaction and its association with receipt of informal or formal care at home differed to some extent between men and women. In the whole study population, women had lower SwL than men at both measurement points, as about 75 per cent of women and 80 per cent of men were satisfied or extremely satisfied with their life. For women receiving formal home care and for men receiving informal care at baseline, were associated with being dissatisfied with life. Previous studies show that social relationships, and especially emotional support, have a strong association with life satisfaction (Amati et al., 2018). As women had less often a partner, they lacked spousal support more often than men. However, for women, being married was not a statistically significant determinant for life satisfaction, as it was for men. For women, among the social variables, a higher income level was connected to higher life satisfaction, and an increase in income level was associated with an increase in life satisfaction. This result indicates that income level plays an important role, especially in older women's life satisfaction. In all, our data seem more explanatory for life satisfaction in men than women, which may indicate that our data and analyses do not capture all the factors affecting women's life satisfaction to the same extent as men's.

Satisfaction with life and receiving either informal or formal care at home can also depend on whether the care meets the person's perceived needs (Kadowaki et al., 2015). It is clear that if a person has health-related needs that weaken life satisfaction

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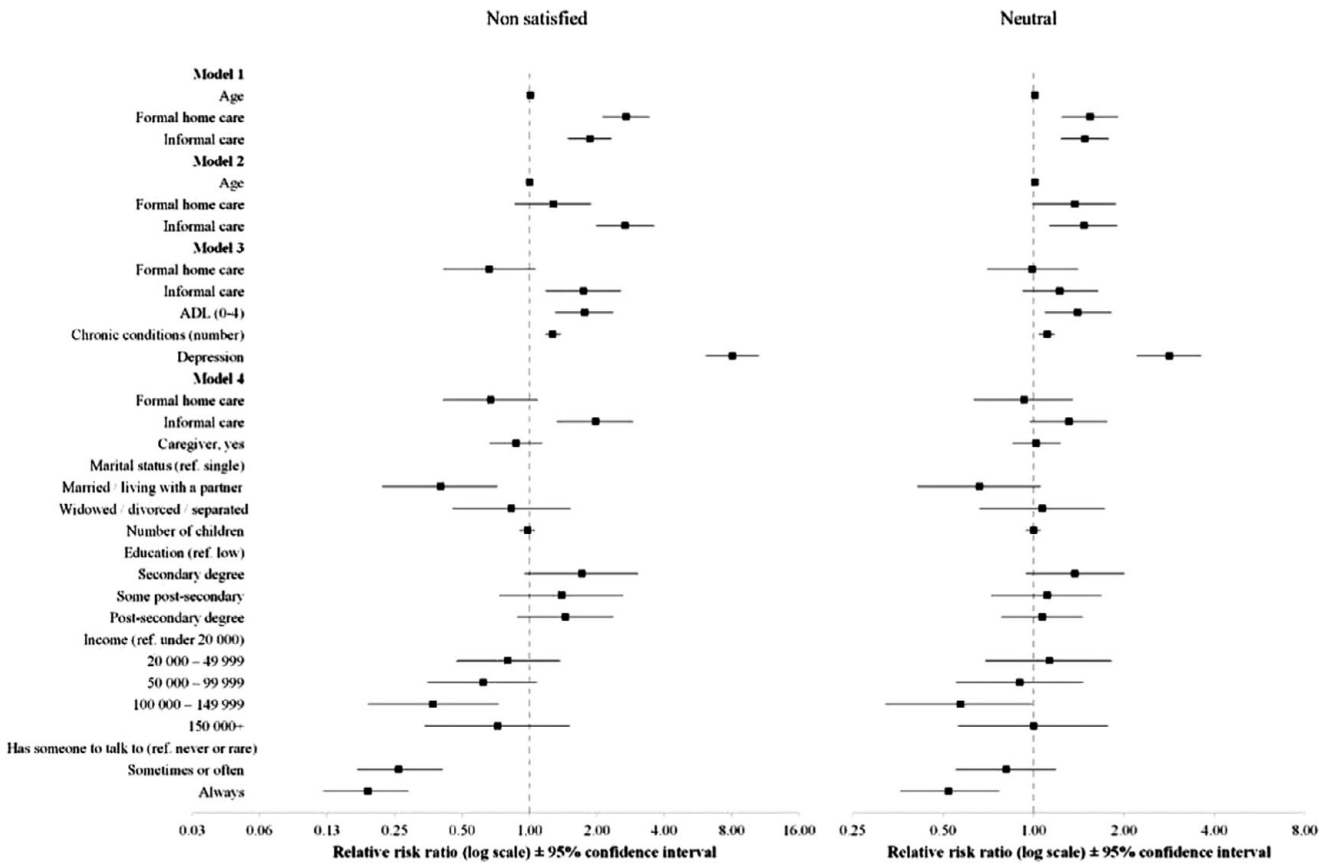

Figure 2. Relative risk ratios (RRR) with 95% confidence intervals (CI) for men from multinomial logistic regression models for the association between the explanatory variables and the SwL at baseline, satisfied / extremely satisfied being the base group for the outcome. Model 3 includes all the variables from Model 2, and Model 4 includes all variables from Model 3. Analyses are computed using 'analytical' weights provided by Canadian Longitudinal Study on Aging (CLSA) (see the CLSA technical document).

and care does not sufficiently address those needs, receiving care does not significantly enhance life satisfaction. For example, in Gilmour (2018b), about a third of formal home care recipients aged 65–84 and a fifth of formal home care recipients aged 85 or older reported unmet care needs in Canada. Depending on the amount and quality of people's needs, both formal and informal care may be insufficient to meet the person's needs. The role of unmet needs in SwL requires a more detailed study that would focus exclusively on the unmet care needs of those receiving informal or formal home care, or combination of different care types and support services. There may be individuals in formal and/or informal home care for whom home care or support services are no longer sufficient to meet their needs and maintain quality home living and life satisfaction.

The object of our interest was the receipt of informal and formal care at home, but numerous conditions and situations interact with and affect SwL (Borg et al., 2006; Joshanloo & Jovanović, 2020), and it is challenging to distinguish these different connections. In addition, many life situations can change at any time, which means that the importance of different life events to life satisfaction varies over time. This underlines the importance of multi-factorial analyses and longitudinal data to shed new light on these relationships. Because the connection between decreased life satisfaction and receiving informal care was not explained by the variables used in our data, the connection between decreased life satisfaction and receiving informal care should be studied in more depth, for example, using qualitative research methods.

Limitations

The relatively high proportion of both men and women with high life satisfaction implies that older the Canadians seem to be satisfied with their lives, a result also found in Canadian Community Health Study (Statistics Canada, 2017). However, the data likely portray a more positive picture of people's life satisfaction than is the reality. While the CLSA was planned as nationally representative, participants are described as more educated, having higher household income, higher percentages of people born in Canada, and higher self-rated health than the population in Canada overall (Raina et al., 2019). According to Raina et al. (2019), the CLSA cohort may under-represent people with lower levels of literacy in French or English and those with health problems, such as hearing problems, memory impairment, and mobility issues.

Our study included only people who participated in the baseline and the first follow-up, which means that we excluded those whose health deteriorated considerably and precluded follow-up, those who moved to long-term care, and those who withdrew. However, our aim was to examine if receiving informal and formal care, and especially the change in care receiver status, is associated with life satisfaction and how it differed by sex. This requires that the person has participated in both data collections.

It is worth also noting that our variables described the situation in the past 12 months; hence, in our change analyses, we do not know which decreased first, life satisfaction or health. Even though there is evidence that health predicts life satisfaction over time, not

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Table 3. The association between the changes in satisfaction with life score and explanatory variables; the difference between baseline and follow-up. Coefficients with 95% confidence intervals (CI) from linear regression models (in bold when statistically significant). Analyses are done separately for men and women. Model 3 includes all the variables from Model 2. BL = baseline, FU = follow-up

	Women						Men					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI
Age	0.01	−0.03, 0.04	0.01	−0.02, 0.05	−0.01	−0.04, 0.03	−0.02	−0.05, 0.01	−0.01	−0.04, 0.26	−0.00	−0.04, 0.03
Formal home care												
BL no, FU no (ref.)												
BL no, FU yes	**−0.68**	**−1.10, −0.26**	−0.34	−0.80.0.12	−0.21	−0.71, 0.30	**−0.53**	**−1.02, −0.04**	0.27	−0.24, 0.78	0.36	−0.16, 0.88
BL yes, FU no	0.58	−0.16, 1.31	**0.98**	**0.18, 1.78**	0.70	−0.12, 1.53	0.18	−0.53, 0.89	0.24	−0.49, 0.97	0.24	−0.53, 1.01
BL yes, FU yes	−1.40	−1.25, 0.07	−0.20	−0.89, 0.48	−0.03	−0.83, 0.77	**−1.06**	**−2.02, −0.11**	−0.53	−1.53, 0.48	−0.71	−1.78, 0.36
Informal care												
BL no, FU no (ref.)												
BL no, FU yes	**−0.78**	**−1.14, −0.42**	**−0.59**	**−0.98, −020**	**−0.48**	**−0.91, −0.04**	**−0.80**	**−1.22, −0.37**	**−0.57**	**−1.01, −0.12**	**−0.65**	**−1.12, −0.18**
BL yes, FU no	−0.10	−0.59, 0.39	−0.12	−0.63, 0.39	−0.11	−0.68, 0.47	0.16	−0.39, 0.70	0.07	−0.51, 0.65	−0.04	−0.67, 0.59
BL yes, FU yes	**−1.42**	**−2.04, −0.77**	**−1.02**	**−1.68, −0.37**	**−0.85**	**−1.59, −0.11**	−0.59	−1.42, 0.23	−0.46	−1.36, 0.43	−0.44	−1.34, 0.46
ADL												
No change (ref.)												
Worsened			**−0.30**	**−0.54, −0.06**	**−0.61**	**−1.04, −0.17**			**−1.47**	**−1.96, −0.98**	**−1.32**	**−1.84, −0.80**
Improved					0.66	−0.40, 0.82			**0.83**	**0.12, 1.53**	**0.91**	**0.14, 1.67**
Chronic conditions[1]			−0.04	−0.16, 0.09	−0.07	−0.21, 0.07			**−0.13**	**−0.25, −0.01**	**−0.13**	**−0.26, −0.01**
Depression												
BL no, FU no (ref.)												
BL no, FU yes			**−2.29**	**−2.84, −1.73**	**−2.32**	**−2.97, −1.67**			**−2.15**	**−2.77, −1.53**	**−2.00**	**−2.65, −1.35**
BL yes, FU no			0.18	−0.33, 0.69	0.22	−0.36, 0.81			−0.15	−0.76, 0.47	−0.31	−0.95, 0.35
BL yes, FU yes			**−2.30**	**−2.98, −1.62**	**−2.30**	**−3.03, −1.56**			**−2.30**	**−3.18, −1.42**	**−2.29**	**−3.19, −1.39**
Caregiver status												
BL no, FU no (ref.)												
BL no, FU yes					−0.01	−0.43, 0.42					−0.03	−0.37, 0.31
BL yes, FU no					−0.17	−0.65, 0.32					0.05	−0.36, 0.46
BL yes, FU no					−0.07	−0.47, 0.34					−0.18	−0.53, 0.17

(Continued)

Table 3. *Continued*

	Women						Men					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI	Coeff.	95% CI
Having a partner												
BL yes, FU yes (ref.)												
BL yes, FU no					0.12	−0.75, 1.01					0.08	−0.77, 0.93
BL no, FU yes					−0.97	−2.59, 0.65					0.78	−0.40, 1.95
BL no, FU no					−0.07	−0.47, 0.34					0.01	−0.33, 0.36
Income												
No change (ref)												
Decreased					0.16	−0.35, 0.68					−0.37	−0.82, 0.07
Increased					**0.66**	**0.25, 1.07**					0.01	−0.34, 0.37
Education												
Low (ref.)												
Secondary degree					−0.30	−0.96, 0.36					0.05	−0.54, 0.64
Some post-secondary					−0.53	−1.33, 0.26					−0.09	−0.78, 0.61
Post-secondary degree					−0.13	−0.66, 0.38					0.15	−0.32, 0.61
Number of children					0.00	−0.09, 0.09					−0.02	−0.11, 0.08
Has someone to talk to												
No change (ref.)												
Increased					−0.15	−0.52, 0.23					**−0.59**	**−0.92, −0.26**
Decreased					−0.07	−0.50, 0.36					**−0.38**	**−0.72, −0.05**

Analyses are computed using 'analytical' weights provided by Canadian Longitudinal Study on Aging (CLSA) (see the CLSA technical document).

so much the other way around (Ní Mhaoláin et al., 2012), there is also evidence that lower life satisfaction can precede poor health (Bi et al., 2022). In other words, while these data are longitudinal, there are limits to understanding the sequencing of events and thus limits to drawing causality and directional effects.

The CLSA data included information on caregiving by participants but did not include information about whom the person helped. In addition, the variable did not specify the intensity of care during the past 12 months. Finally, gender diversity could not be accounted for in this study because the gender question was formulated as a binary, and thus the responses were distributed accordingly.

Conclusions

Factors such as health and functioning ability that are linked to life satisfaction are also linked to care needs. It is possible that addressing these health and functioning needs through home care improves or maintains health and functional capacity and prevents the need for care, which positively impacts life satisfaction. However, the factors explaining the need for care did not explain the declining life satisfaction associated with receiving informal care. Although informal care is common, it is not necessarily suitable or sufficient for everyone and may be connected to decrease in life satisfaction. As the number of older people will increase in the future, and as a larger number of older men and women are cared for at home, formal home care services should be designed according to individual needs related to health and social factors so that they truly meet people's well-being needs. When relying on informal care, it is crucial to know how it affects the life of the person cared for and the informal caregiver, and how they experience informal care and its sufficiency in their everyday life.

Supplementary material. The supplementary material for this article can be found at http://doi.org/10.1017/S0714980825000066.

Data availability. Data are available from the Canadian Longitudinal Study on Aging (www.clsa-elcv.ca) for researchers who meet the criteria for access to de-identified CLSA data.

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Competing interests. The authors declare that they have no conflict of interest.

Disclaimer. The opinions expressed in this manuscript are the authors' own and do not reflect the views of the Canadian Longitudinal Study on Aging.

References

Abdul Rahman, H., Tengah, A., Mohd Yusof, Y., Slesman, L., Hoon, C. Y., & Abdul-Mumin, K. H. (2022). Predictors of satisfaction with life and health status of older people in Brunei: A gender comparative study. *International Journal of Public Health*, **67**, 1605042. https://doi.org/10.3389/iiph.2022.1605042

Amati, V., Meggiolaro, S., Rivellini, G., & Zaccarin, S. (2018). Social relations and life satisfaction: the role of friends. *Genus*, **74**(1), 7. https://doi.org/10.1186/s41118-018-0032-z

Andersen, R., Newman, J.F. (2005). Societal and Individual Determinants of Medical Care Utilization in the United States. *Milbank Q. Volume* **83**(4): https://doi.org/10.1111/j.1468-0009.2005.00428.x. PMCID: PMC2690261.

Andréasson F., Mattsson, T., & Hanson, E. (2021). The balance in our relationship has changed': everyday family living, couplehood and digital spaces in informal spousal care. *Journal of Family Studies*, **29**(2), 719–737. https://doi.org/10.1080/13229400.2021.1980421

Becchetti, L., & Conzo, G. (2022). The gender life satisfaction/depression paradox. *Social Indicators Research*, **160**(1), 35–113. https://doi.org/10.1007/s11205-021-02740-5

Beutell, N. (2006) Life Satisfaction. Sloan Network Encyclopedia Entry, https://wfrn.org/wp-content/uploads/2018/09/Life-Satisfaction-encvclopedia.pdf

Bi, K., Chen, S., Yip, P. S. F., & Sun, P. (2022). Domains of life satisfaction and perceived health and incidence of chronic illnesses and hospitalization: Evidence from a large population-based Chinese cohort. *BMC Public Health*, **22**(1), 1703. https://doi.org/10.1186/s12889-022-14119-3

Borg, C., Hallberg, I. R., & Blomqvist, K. (2006). Life satisfaction among older people (65+) with reduced self-care capacity: The relationship to social, health and financial aspects. *Journal of Clinical Nursing*, **15**(5), 607–618. https://doi.org/10.1111/j.1365-2702.2006.01375.x

Boumans, J., & Deeg, D. J. (2011). Veranderingen in de kwaliteit van leven van thuiswonende ouderen: speelt de vorm van zorg een rol? [Changes in the Quality of Life of older People Living at Home: Does Type of Care Play a Role?]. *Tijdschrift moot gerontologie en geriatrie*, **42**(4), 170–183. https://doi.org/10.1007/s12439-011-0031-4

Bo, H., & Lei, L. (2020). The Protective Effects of Informal Care Receipt Against the Progression of functional Limitations Among Chinese Older People, *The Journals of Gerontology: Series B*, Volume **75**, Issue 5, 1030–1041, https://doi.org/10.1093/geronb/gby107

Carmel, S. (2019). Health and well-being in late life: gender differences worldwide. *Frontiers in Medicine*, **6**, 218. https://doi.org/10.3389/fmed.2019.00218

Chipperfield, J. G., & Havens, B. (2001). Gender differences in the relationship between marital status transitions and life satisfaction in later life. *The Journals of Gerontology Series B, Psychological Sciences and Social Sciences*, **56**(3), P176–P186. https://doi.org/10.1093/geronb/56.3.p176

CLSA Canadian Longitudinal Study on Aging. (2021). Data Support Documentation. Derived Variables. https://www.clsa-elcv.ca/researchers/data-support-documentation. Accessed September 2021.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, **49**(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Gigantesco, A., Fagnani, C., Toccaceli, V., Stazi, M. A., Lucidi, F., Violani, C., & Picardi, A. (2019). The relationship between satisfaction with life and depression symptoms by gender. *Frontiers in Psychiatry*, **10**, 419. https://doi.org/10.3389/fpsyt.2019.00419

Gilmour, H. (2018a). Formal home care use in Canada. *Health Reports*, **29**(9), 3–9.

Gilmour, H. (2018b). Unmet home care needs in Canada. *Health Reports*, **29**(11), 3–11.

Good, G. A., LaGrow, S., & Alpass, F. (2008). An age-cohort study of older adults with and without visual impairments: Activity, independence, and life satisfaction. *Journal of Visual Impairment & Blindness*, **102**(9), 517–527. https://doi.org/10.1177/0145482X0810200902

Government of Canada. (2016). Home and Community Health care. What is Home and Community Care? Date modified: 2016-04-13. https://www.canada.ca/en/health-canada/services/home-continuing-care/home-community-care.html Accessed Nov 18 2021.

Janlöv, A. C., Hallberg, I. R., & Petersson, K. (2006). Older persons' experience of being assessed for and receiving public home help: Do they have any influence over it?. *Health & Social Care in the Community*, **14**(1), 26–36. https://doi.org/10.1111/j.1365-2524.2005.00594.x

Joshanloo, M., & Jovanović, V. (2020). The relationship between gender and life satisfaction: Analysis across demographic groups and global regions. *Archives of Women's Mental Health*, **23**(3), 331–338. https://doi.org/10.1007/s00737-019-00998-w

Kadowaki, L., Wister, A. V., & Chappell, N. L. (2015). Influence of home care on life satisfaction, loneliness, and perceived life stress. *Canadian Journal on Aging = La revue canadienne du vieillissement*, **34**(1), 75–89. https://doi.org/10.1017/S0714980814000488

Kim, J., & Yoon, H. (2022). Longitudinal associations between expectations of receiving care in the future and life satisfaction among older adults in Korea. *The Journals of Gerontology Series B, Psychological Sciences and Social Sciences*, **77**(3), 604–614. https://doi.org/10.1093/geronb/gbab121

Lee, Y., Barken, R., & Gonzales, E. (2020). Utilization of formal and informal flome care: Flow do older canadians' experiences vary by care arrangements?. *Journal of Applied Gerontology: The Official Journal of the Southern Gerontological Society* **39**(2), 129–140. https://doi.org/10.1177/0733464817750274

Martyr A, Nelis SM, & Quinn C, et al. (2018). Living well with dementia: a systematic review and correlational meta-analysis of factors associated with quality of life, well-being and life satisfaction in people with dementia. *Psychological Medicine*. **48**(13), 2130–2139. https://doi.org/10.1017/S0033291718000405

Moreno-Agostino, D., Abad, F. J., & Caballero, F. F. (2022). Evidence on the bidirectional relationship between health and life satisfaction in older adults. *Journal of Happiness Studies*, **23**, 1561–1577. https://doi.org/10.1007/s10902-021-00462-6

Ní Mhaoláin, A. M., Gallagher, D., O Connell, H., Chin, A. V., Bruce, I., Hamilton, F., Teehee, E., Coen, R., Coakley, D., Cunningham, C., Walsh, J. B., & Lawlor, B. A. (2012). Subjective well-being amongst community-dwelling elders: What determines satisfaction with life? findings from the Dublin healthy aging study. *International Psychogeriatrics*, **24**(2), 316–323. https://doi.org/10.1017/S1041610211001360

Ouyang, P., Sun, W., & Wang, C. (2019). Well-being loss in informal care for the elderly people: Empirical study from china national baseline CHARLS. *Asia-Pacific Psychiatry: Official Journal of the Pacific Rim College of Psychiatrists*, **11**(2), e12336. https://doi.org/10.1111/appy.12336

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, **5**(2), 164–172. https://doi.org/10.1037/1040-3590.5.2.164

Pereira, M. G., Ramos, C., Lobarinhas, A., Machado, J. C., & Pedras, S. (2018). Satisfaction with life in individuals with a lower limb amputation: the importance of active coping and acceptance. *Scandinavian Journal of Psychology*, **59**, 414–421.

Pot, A. M., Portrait, F., Visser, G., Puts, M., Broese Van Groenou, M., & Deeg, D. (2009). Utilization of acute and long-term care in the last year of life: Comparison with survivors in a population-based study. *BMC Health Services Research*, **9**, 139. https://doi.org/10.1186/1472-6963-9-139

Raina, P., Wolfson, C., Kirkland, S., Griffith, L. E., Balion, C., Cossette, B., Dionne, I., Hofer, S., Hogan, D., van den Heuvel, E. R., Liu-Ambrose, T., Menec, V., Mugford, G., Patterson, C., Payette, H., Richards, B., Shannon, H., Sheets, D., Taler, V., Thompson, M., … Young, L. (2019). Cohort profile: The Canadian longitudinal study on aging (CLSA). *International Journal of Epidemiology*, **48**(6), 1752–1753j. https://doi.org/10.1093/ije/dyz173

Raina, P. S., Wolfson, C., Kirkland, S. A., Griffith, L. E., Oremus, M., Patterson, C., Tuokko, H., Penning, M., Balion, C.M., Hogan, D., Wister, A., Payette, H., Shannon, H., Brazil, K. (2009). The canadian longitudinal study on aging (CLSA). *Canadian Journal on Aging/La Revue Canadienne Du Vieillissement*, **28**(3), 221–229. https://doi.org/10.1017/S0714980809990055

Rissanen, T., Viinamäki, H., Honkalampi, K., Lehto, S. M., Hintikka, J., Saharinen, T., & Koivumaa-Honkanen, H. (2011). Long term life dissatisfaction and subsequent major depressive disorder and poor mental health. *BMC Psychiatry*, **11**,140. https://doi.org/10.1186/1471-244X-11-140

StataCorp. (2019). Stata Statistical Software: Release 16. College Station, TX: StataCorp LLC (https://www.stata.com/support/faas/resources/citine-software-documentation-faas/)

Statistics Canada. (2017). Health Fact Sheets. Life satisfaction. Canadian Community Health Survey 2017. https://www150.statcan.ec.ca/n1/pub/82-625-x/2019001/article/00002-ene.htm

Statistics Canada. (2021). Home Care Use and Unmet Home Care Needs in Canada. Released 2022-08-26. https://www150.statcan.gc.ca/n1/daily-quotidien/220826/dq220826a-eng.htm

Swinkels, J. C., Suanet, B., Deeg, D. J. H., & Broese Van Groenou, M. I. (2016). Trends in the informal and formal home-care use of older adults in the Netherlands between 1992 and 2012. *Ageing and Society*, **36**(9), 1870–1890. https://doi.org/10.1017/S0144686X1500077X

Tavares, A. I. (2022). Health and life satisfaction factors of portuguese older adults. *Archives of Gerontology and Geriatrics*, **99**,104600. https://doi.org/10.1016/j.archger.2021.104600

Vafaei, A., Rodrigues, R., Ilinca, S., Fors, S., Kadi, S., Zolyomi, E., Phillips, S.P. (2023). Inequities in home care use among older Canadian adults: Are they corrected by public funding? *PLoS One*, **18**(2), e0280961. https://doi.org/10.1371/journal.pone.0280961.

Wilhelmson, K., Fritzeil, E., Eklund, K., & Dahlin-Ivanoff, S. (2013). Life satisfaction and frailty among older adults. *Health Psychology Research*, **1**(3), e32. https://doi.org/10.4081/hpr.2013.e32

Zwar, L., König, H. H., & Hajek, A. (2019). Life satisfaction of informal care recipients: findings from the german ageing survey. *British Journal of Health Psychology*, **24**: 859–875. https://doi.org/10.1111/bihp.12383

Zwar, L., König, H. H., & Hajek, A. (2020). The impact of receiving informal care on self-esteem and its moderation by social class. *Aging & Mental Health*, **24**(10), 1736–1745. https://doi.org/10.1080/13607863.2019.1617241