Understanding the Factors Driving the Epidemic of Social Isolation and Loneliness among Older Canadians



National Institute on Ageing



Suggested Citation: A Bull, N Iciaszczyk, SK Sinha. Understanding the Factors Driving the Epidemic of Social Isolation and Loneliness among Older Canadians. Toronto, ON: National Institute on Ageing (2023), Toronto Metropolitan University.

ISBN: 978-1-77417-081-6

© National Institute on Ageing, Toronto Metropolitan University

Mailing Address:

National Institute on Ageing
Ted Rogers School of Management
350 Victoria St.
Toronto, Ontario
M5B 2K3
Canada

Disclaimer

This document can be reproduced without permission for non-commercial purposes, provided that the NIA is acknowledged.

About the National Institute on Ageing

The National Institute on Ageing (NIA) is a public policy and research centre based at Toronto Metropolitan University (formerly Ryerson University). The NIA is dedicated to enhancing successful ageing across the life course. It is unique in its mandate to consider ageing issues from a broad range of perspectives, including those of financial, psychological, and social wellbeing.

The NIA is focused on leading cross-disciplinary, evidence-based, and actionable research to provide a blueprint for better public policy and practices needed to address the multiple challenges and opportunities presented by Canada's ageing population.

The NIA is committed to providing national leadership and public education to productively and collaboratively work with all levels of government, private and public sector partners, academic institutions, ageing related organizations, and Canadians.



Authors

Amanda Bull, MA

RTOERO Summer Scholar, National Institute on Ageing, Toronto Metropolitan University Toronto, Ontario

Natalie Iciaszczyk, MA, JD

Research Program Manager, National Institute on Ageing, Toronto Metropolitan University Toronto, Ontario

Samir K. Sinha, MD, DPhil, FRCPC, FCAHS, AGSF

Director of Health Policy Research,
National Institute on Ageing,
Toronto Metropolitan University;
Director of Geriatrics, Sinai Health
System and University Health Network;
Professor of Medicine, Family &
Community Medicine, Health Policy,
Management and Evaluation,
University of Toronto



Table of Contents

Executive Summary	6
Background and Context	9
About the 2022 NIA Ageing in Canada Survey	11
Defining and Measuring Social Isolation and Loneliness	12
What Is the Prevalence of Social Isolation and Loneliness among Older Canadians?	16
Are There Differences in Social Isolation and Loneliness across Age Groups among Older Canadians?	17
How Do the Experiences of Older Men and Women in Canada Differ When It Comes to Social Isolation and Loneliness?	19
How Do Family Ties Shape Social Isolation and Loneliness among Older Canadians?	21
How Does Socioeconomic Status Shape Experiences of Social Isolation and Loneliness among Older Canadians?	24
How Does One's Health Shape Experiences of Social Isolation and Loneliness among Older Canadians?	28
How Does Immigration Status Influence Older Adults' Experience of Social Isolation and Feelings of Loneliness?	31
Next Steps to Better Support Older Canadians and Address Social Isolation and Loneliness across Canada	33
Conclusion	40
References	41
NC1C1 C11CC5	41

Executive Summary

Social isolation and loneliness are becoming increasingly recognized as significant public health concerns, particularly for older individuals, across Canada and around the world. With older persons making up a rapidly growing proportion of Canada's population, the number of isolated or lonely older Canadians is expected to significantly increase, meaning that both the individual and societal consequences of loneliness and social isolation will likely also become more severe.

Media, government and academic literature have often used the terms "social isolation" and "loneliness" interchangeably. While they are related, these are distinct states that can occur throughout a person's lifespan; these concepts also reflect different aspects of our social lives. "Social isolation" is defined as an objective lack of contacts, family or friends, while "loneliness" is an undesirable subjective experience, related to unfulfilled social needs.²

To date, a lack of consistent definitions and measurement scales of loneliness and social isolation have made it challenging to fully characterize the scope of the problem in Canada, which could better enable measures to address it. This report aims to fill this evidence gap by examining the extent to which social isolation and loneliness are impacting older Canadians. Using data from the first NIA Ageing in Canada Survey administered in 2022, this report provides

the most currently available estimates of reported rates of social isolation and loneliness among older Canadians based on a representative sample of community-dwelling Canadians aged 50 and older living in Canada's 10 provinces.

Overall, social isolation and loneliness appear to be significant issues affecting the older population in Canada.

The NIA's 2022 Ageing in Canada Survey found that as many as 41% of Canadians aged 50 years and older are at risk of social isolation and up to 58% have experienced loneliness.

This report also identifies and examines which segments of the older population appear to be most at risk and the factors that appear to contribute to their experiences of social isolation and loneliness. In particular, it examines patterns of differences in reported social isolation and loneliness among older Canadians based on age, gender, family ties, socioeconomic status, health and immigration status.

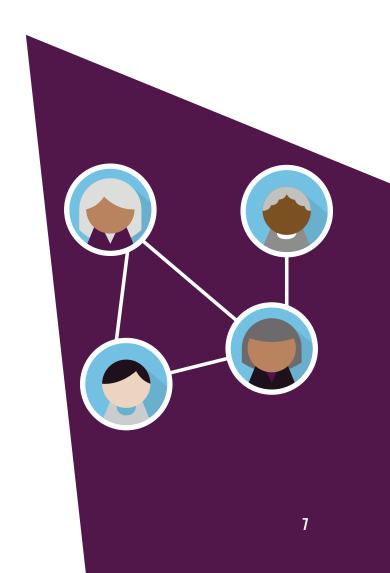
Both social isolation and loneliness remain significant concerns regardless of age, but the oldest Canadians, aged 80 years and older, appear to fare better and report less social isolation and loneliness compared to their younger counterparts aged 50–64 years and 65–79 years. In

the case of gender, the NIA's Ageing in Canada Survey found that there are no major differences between older Canadian men and women in their reported experiences of social isolation, but older women reported experiencing greater levels of loneliness than older men.

The NIA's survey also revealed that the presence of family ties appears to be especially important in protecting against social isolation and loneliness among older Canadians. Specifically, the presence of both partnerships and children appears to have considerable benefits in old age, while not having a partner or children appears to contribute to greater experiences of social isolation and feelings of loneliness.

Socioeconomic status was also found to be an important predictor of social isolation and loneliness among older Canadians. In particular, those who reported higher levels of educational attainment and better income security consistently reported less social isolation and loneliness. On the other hand, minimal differences were observed in social isolation and loneliness based on employment status among Canadians aged 50 years and older overall. However, examining distinct age groups revealed that Canadians aged 50-79 years who were working were less likely to be socially isolated than those who were unemployed, whereas Canadians aged 80 years and older who were working were more likely to be isolated than their unemployed counterparts.

Levels of social isolation and loneliness were found to be markedly different across the self-reported health status of older Canadians. The higher rated one's health status was, the less likely they were to report being socially isolated or experiencing feelings of loneliness. Overall, however, social isolation and loneliness levels remained significant regardless of older Canadians' reported health status, underscoring the serious risk that these issues pose for older Canadians at larger. The NIA survey also revealed that older Canadians living independently in their own homes were less likely to experience social isolation and have feelings of loneliness than those living in someone else's home or other types of dwellings such as a care setting.



When immigration status was examined, the NIA's survey found that social isolation and loneliness levels among immigrant Canadians aged 50 years and older were comparable to those of second- or thirdgeneration Canadians.

Overall, the findings from the NIA's 2022 Ageing in Canada Survey confirm that social isolation and loneliness are significant issues affecting older adults in Canada. As such, the NIA outlines key considerations that can be used as next steps to better support older Canadians and address the realities and challenges of social isolation and loneliness across Canada. These include both the development of a national strategy and the need for investments in research and the evaluation of existing programs and initiatives to establish sustainable best practices to better address social isolation and loneliness. In addition, there should be further consideration of emerging areas and promising practices that could potentially better support older adults who may be especially at risk. By facilitating the creation of more age-friendly communities, expanding the availability of social prescribing programs and supporting the development of useful technologies that could better address these issues, governments can continue efforts to reduce the prevalence and negative impacts of social isolation and Ioneliness across Canada.



Background and Context

Social isolation and loneliness are becoming increasingly recognized as significant public health concerns, particularly for older individuals, across Canada and around the world. Older adults are at an increased risk of experiencing social isolation and loneliness, and are especially vulnerable to its negative impacts on their own health and well-being. Mood disorders, dementia, cardiovascular disease, malnutrition, falls and premature mortality are just a few of the adverse health outcomes that both social isolation and loneliness have been linked among older adults.3,4,5

With older persons making up a rapidly growing proportion of Canada's population, the number of isolated or lonely older Canadians is expected to significantly increase,6 meaning that both the individual and societal consequences of loneliness and social isolation will likely also become more severe. It is therefore important to fully understand the prevalence and consequences of social isolation and loneliness in Canada to better inform effective, evidence-based strategies that can both prevent and mitigate their harmful impacts and promote ageing well.

Media, government and academic literature have often used the terms "social isolation" and "loneliness" interchangeably. While they are related, these are distinct states that can occur throughout a person's lifespan; these concepts also reflect different aspects of our social lives. "Social isolation" is

defined as an objective lack of contacts, family or friends, while "loneliness" is an undesirable subjective experience, related to unfulfilled social needs.⁷

Older adults are especially at risk of experiencing social isolation and loneliness because the ageing process is often characterized by transitional life events that shift one's roles and circumstances, which can also make it more difficult to maintain or establish social ties.

Traditional sources of social support may diminish or disappear due to common life events in old age such as retirement, widowhood and the death of family members and friends. 8,9 In addition, declining physical health and/or mobility due to factors such as chronic conditions, incontinence, visual or hearing impairments, and frailty can also lead to reduced social participation among older adults. 10,11,12,13,14,15,16,17,18

However, while we know that older adults are at greater risk of experiencing social isolation and loneliness, we still don't fully understand the extent to which these issues affect older Canadians. One reason has been significant data gaps in characterizing the Canadian context, such as a lack of representative samples and inconsistency in the variables used to measure social isolation and loneliness, which have led to widely varying

prevalence estimates. Ultimately, a lack of consistent definitions and measurement scales of loneliness and social isolation have made it challenging to fully characterize the scope of the problem in Canada, which could better enable measures to address it.

This report aims to fill this evidence gap by examining the extent to which social isolation and loneliness are impacting older Canadians. With the recent launch of the annual NIA Ageing in Canada Survey, the NIA has begun to rigorously measure and track reported rates of social isolation and loneliness among Canadians aged 50 years and older. Using data from the first NIA Ageing in Canada Survey administered in 2022, this report provides the most currently available estimates of reported rates of both social isolation and loneliness among older Canadians based on a representative sample of community-dwelling Canadians aged 50 and older living in Canada's 10 provinces. This report also identifies and examines which segments of the older population appear to be most at risk and the factors that appear to contribute to their experiences of social isolation and loneliness. In particular, it examines patterns of differences in reported social isolation and loneliness among older Canadians based on age, gender, family ties, socioeconomic status, health and immigration status. These findings should give governments, policymakers, service-delivery providers and community organizations helpful insights into the extent of the current problem and the necessary evidence to develop and implement more targeted interventions.

Finally, the NIA examines potential next steps that can be taken to help better support older Canadians and address the issue of social isolation and loneliness across the country.



About the 2022 NIA Ageing in Canada Survey

The NIA has partnered with the Environics Institute for Survey Research to develop an annual survey of ageing in Canada to track, over the coming decade, how Canadians feel about both their experience and expectations of growing old in Canada. The annual NIA Ageing in Canada Survey was designed to track how older Canadians feel about key ageingrelated issues, and how that changes each year over a 10-year period. Specifically, the survey captures older Canadians' perspectives across three dimensions of ageing: social well-being, financial security, and health and independence. It does so with key indicators that, when analyzed annually, will make it possible to measure progress — or setbacks — over time across these three dimensions of ageing.

The 2022 NIA Ageing in Canada Survey was conducted online with 5,885 Canadians aged 50 years and older from July 5 to August 7, 2022.

This report is based on the results from this inaugural benchmark survey that will serve as the initial point of reference against which Canadians' evolving perspectives and experiences on issues such as social isolation and loneliness will be tracked over time.

The survey, comprised of 62 questions and lasting 20 to 25 minutes, was administered online with a representative sample of community-dwelling Canadians aged 50 and older living in Canada's 10 provinces, using standard survey industry recruitment and confidentiality protocols. The survey sample was designed to provide meaningful categories, with robust representation by five-year increments for age cohorts across this population.

The survey did, however, miss important segments of the older Canadian population that could impact our results in some ways. For one, our survey was not able to capture the experiences of community-dwelling older Canadians living in Canada's three northern territories due to an inability to reach a sufficient number of them through Canadian online survey platforms. In addition, our survey does not include Canadians living in institutional settings, such as long-term care homes, a key segment of Canada's older population with potentially differing experiences of social isolation and loneliness. Finally, given that this survey was conducted online, it is also biased towards the experiences of older Canadians who have a computer, internet access and sufficient digital literacy — all of which are factors with serious implications for education and socioeconomic status, and therefore social isolation and loneliness as well.

Defining and Measuring Social Isolation and Loneliness

The terms "social isolation" and "loneliness" continue to be used both interchangeably and inconsistently in both research and the media, making it difficult for many to appreciate the unique aspects of these inter-related but distinct concepts. A representative definition of "social isolation" refers to a measurable deficiency in a person's social relationships. 19 It is the objective lack of connections that leads to a quantitatively diminished social network and fewer social interactions with family, friends or the community.²⁰ In comparison, "loneliness" is typically defined as an internal subjective experience that arises when a person's social relationships are lacking in quality and/or quantity compared to what they desire.²¹

Drawing a clear distinction between these two concepts helps to recognize an important caveat about how individuals manage their social lives: a person's subjective perceptions of their social resources do not necessarily reflect the actual social context.

This means that how an individual experiences their social situation can differ from objectively measured relationships or social contacts. Older adults with multiple relationships and strong social ties may still experience feelings of loneliness. On the other hand, older adults could have fewer relationships and still feel integrated and sufficiently supported by family and friends.

Defining Social Isolation and Loneliness

Social Isolation

A measurable deficiency in the number of social relationships that a person has.

Loneliness

An internal subjective experience; it is an unpleasant sensation felt when a person's social relationships are lacking in quality and/or quantity compared to what they desire.

Across disciplines and research contexts, various indicators and instruments have also been used to measure social isolation and loneliness. The use of heterogeneous definitions and measurement scales have made it challenging to interpret existing research findings and apply conclusions drawn from various studies to the broader context. In its previous report, *Understanding Social Isolation* and Loneliness Among Older Canadians and How to Address It, published in 2022, the NIA suggested that predetermined national definitions and standardized tools that can be used in a variety of contexts be adopted and integrated into clinical, organizational and primary data collection and research settings. The NIA also examined and specifically recommended the use of more commonly used scales that have been both established and validated within the existing research literature and could be reliably used to assess social isolation and loneliness within Canada's older population.

There are multiple tools and measures that can be used to assess social isolation and loneliness, including comprehensive scales such as the Duke Social Support Index and UCLA Loneliness Scale that the NIA recommended be considered for programming and research purposes. The NIA also suggested that the Lubben Sixitem Social Network Scale (LSNS-6) and the Hughes Three-item Loneliness Scale be used in clinical and other assessments given their ease of administration. Both these measurement tools are also useful given their reliability and validity in large population-based surveys and studies of older adults.^{22,23} For these reasons, the Lubben Six-item Social Network Scale

and the Hughes Three-item Loneliness
Scale were integrated in the NIA Ageing in
Canada Survey and serve as the measures
being used to produce the findings
presented in this report. Additionally,
these measures have made it possible for
the NIA Ageing in Canada Survey to begin
annually tracking the prevalence of social
isolation and loneliness while balancing
the survey's overall objective of capturing
Canadians' perspectives and experiences
across a broad range of ageing-related
issues.

Measuring Social Isolation

The Lubben Social Network Scale (LSNS) is one of the most widely used measures of social isolation, developed specifically for use among older populations and designed to quantify social contacts and social participation.²⁴

Originally, the scale consisted of 10 items, but an abbreviated version, the LSNS-6, was later developed to create a valid and reliable shorter scale that could be more easily administered. The LSNS-6 assesses social isolation in older adults by measuring the size of active social networks consisting of family and friends.²⁵

The LSNS-6 is made up of three questions about the availability of family and three questions about the availability of friends. The total score on the scale ranges from 0 to 30, with higher scores indicating stronger networks and less social isolation. A score of 12 has been identified as the key cut-off point, with a score of less than 12 suggesting that a person is socially isolated.²⁶

Lubben et al. Six-item Social Network Scale

Questions	None	One	Two	Three or four	Five to eight	Nine or more		
Family: Considering the people to whom you are related by birth, marriage, adoption, etc								
How many relatives do you see or hear from at least once a month?	0	1	1	3	4	5		
2. How many relatives do you feel at ease with that you can talk to about private matters?	0	1	2	3	4	5		
3. How many relatives do you feel close to such that you could call on them for help?	0	1	2	3	4	5		
Friendships: Considering all of your friends including those who live in your neighbourhood								
4. How many of your friends do you see or hear from at least once a month?	0	1	2	3	4	5		
5. How many friends do you feel at ease with that you can talk to about private matters?	0	1	2	3	4	5		
6. How many friends do you feel close to such that you could call on them for help?	0	1	2	3	4	5		

Scoring: Total score is an equally weighted sum of these six items. Scores range from 0 to 30.

Measuring Loneliness

The Hughes Loneliness Scale (HLS) is also one of the most widely used measures of loneliness established within existing literature. It asks about companionship, feeling left out and feeling isolated, and was designed to provide a rapid measure of loneliness for larger surveys.²⁷

The scale was developed in 2004 by shortening the Revised UCLA Loneliness Scale, which has 20 items and four corresponding response categories for each, to provide a shorter and less complex form of data collection in large studies.²⁸ The scale is composed of only three questions and a simplified set of response options (HLS-3).²⁹

Responses to the three questions are added together and possible scores on the scale ranging from 3-9, with higher scores indicating greater levels of loneliness. Researchers have taken different approaches to grouping and classifying response scores. Some studies have simply classified people who score 3–5 as "not lonely" and those who score 6-9 as "lonely", 30,31 while others have also separated individuals who are "moderately lonely" (having a score of 4-5) from those who are "severely lonely" (having a score of 6-9).32 For the purposes of this analysis, people who score 3 are considered to be "not lonely," while those who score 4-6 are "somewhat lonely" and those who score 7-9 are "very lonely."

Hughes et al. Three-item Loneliness Scale

Questions	Hardly Ever	Some of the Time	Often
1. How often do you feel that you lack companionship?	1	2	3
2. How often do you feel left out?	1	2	3
3. How often do you feel isolated from others?	1	2	3

Scoring: Sum the total of all Items, up to a max score of 9. Higher scores indicate greater loneliness

What Is the Prevalence of Social Isolation and Loneliness among Older Canadians?

Overall, social isolation and loneliness appear to be significant issues affecting the older population in Canada. The NIA's survey found that while most older Canadians report having strong social networks, a sizeable share also report being socially isolated. The NIA's survey also found that the reported prevalence of loneliness is even higher, with the majority of older Canadians having reported feeling either somewhat lonely or very lonely.

The NIA's 2022 Ageing in Canada Survey found that as many as 41% of Canadians aged 50 years and older are at risk of social isolation and up to 58% have experienced loneliness.

While both social isolation and loneliness are concerns in the Canadian context, it appears that not all instances of loneliness are necessarily being caused by social isolation. Some older Canadians may be socially engaged and have larger social networks, but still subjectively perceive that they do not have meaningful connections or feel disconnected from those around them.

- While most older Canadians report that they have a network of family and friends that they can count on, more than **four in 10** older Canadians are considered to be socially isolated on the LSNS-6.
 - When using a score of less than 12 on the LSNS-6 as the cut-off point for social isolation, 41% of Canadians aged 50 years and older are deemed as socially isolated. On the other hand, only 59% of Canadians aged 50 years and older appear to be somewhat wellconnected or have strong social ties, scoring between 12 and 30 on the LSNS-6.
- Older Canadians report even higher levels of loneliness than social isolation, with the majority (58%) experiencing some level of loneliness based on the HLS-3.
 - 18% of Canadians aged 50 years and older are very lonely (scoring 7–9) and another 40% are somewhat lonely (scoring 4–6). On the other hand, 42% of Canadians aged 50 years and older are not lonely (having a score of 3), indicating that they hardly ever feel left out, isolated from others or that they lack companionship.

Are There Differences in Social Isolation and Loneliness across Age Groups among Older Canadians?

Levels of reported social isolation and loneliness appear to differ markedly across older age groups. The oldest Canadians, aged 80 years and older, appear to fare better and report less social isolation and loneliness compared to their younger counterparts aged 50–64 years and 65–79 years. However, overall both social isolation and loneliness remain significant concerns regardless of age, with a sizeable share of older Canadians experiencing both social isolation and loneliness.

The 2022 NIA Ageing in Canada Survey found that:

- Canadians aged 80 years and older are the least likely to report experiencing social isolation.
 - Less than a third (30%) of Canadians aged 80 years and older could be classified as socially isolated on the LSHS-6 (scoring less than 12) compared to 45% of Canadians aged 50-64 years and 40% of Canadians aged 65-79 years.

- Just as in the case of social isolation, the oldest Canadians report the lowest levels of loneliness.
 - Among Canadians aged 80 years and older, **9%** are very lonely (scoring 7–9) and **38%** are somewhat lonely (scoring 4–6), while **53%** are not lonely (scoring 3) based on the HLS-3.
 - On the other hand, among Canadians aged 50-64 years, almost one in four (23%) are very lonely (scoring 7–9) and another 41% are somewhat lonely (scoring 4–6), while only 36% are not lonely (scoring 3).
 - In terms of Canadians aged 65–79 years, 14% are very lonely (scoring 7–9) and 39% are somewhat lonely (scoring 4–6), while 47% are not lonely (scoring 3).

The fact that the oldest Canadians aged 80 years and older report the lowest levels of social isolation and loneliness when compared to their counterparts aged 50–79 years may seem somewhat surprising when one considers the various factors that would suggest that these issues should be more prevalent among older adults. Changes in social networks and relationships occur naturally as people get older, with existing research studies showing that social networks tend to decrease in size as individuals



age, resulting in fewer social partners and less frequent social contact later in life.33,34,35,36 Social networks get smaller with widowhood and the death of loved ones, and opportunities for social interaction are often reduced by the loss of social roles (such as retiring from paid occupational roles), and physical and cognitive limitations that are more commonly experienced later in life and can impede communication and mobility.^{37,38} These reasons would suggest that levels of social isolation and loneliness would be highest in the oldest age groups, for whom the loss of a spouse and friends as well as physical and sensory declines are more common.

However, there is a growing body of research showing that the relationship between age and social isolation and loneliness may not necessarily be linear — that is, where the older the individual, the more isolated and/or lonelier they are likely to be.³⁹ One possible explanation could be positive selection bias,⁴⁰ where because of the increased risk of mortality that is associated with social isolation and loneliness, older adults experiencing higher levels of isolation and loneliness are not likely to live as long as other older persons.

Given that the risk of premature mortality from social isolation and loneliness has been found to be comparable to other well-established risk factors such as smoking, lack of physical activity, obesity, substance abuse, injury and violence, and lack of access to health care, ⁴¹ it is very plausible that among older adults experiencing these issues, fewer survive to older ages.

However, older adults may also develop a different perspective on life and deeper and more meaningful connections as they age, leading to fewer experiences of social isolation and loneliness as they age. In fact, the finding of lower levels of social isolation and loneliness among Canadians aged 80 years and older is, however, also consistent with the broader findings of the 2022 NIA Ageing in Canada Survey, where these oldest Canadians consistently reported better outcomes across key indicators of social well-being, as well as financial security and health and independence, compared to their younger counterparts aged 50–79 years. Nevertheless, even if the prevalence is lower among Canadians aged 80 years and older, these estimates suggest that overall social isolation and loneliness remain significant problems among older adults living in Canada, regardless of age.

How Do the Experiences of Older Men and Women in Canada Differ When It Comes to Social Isolation and Loneliness?

When it comes to gender, unlike in the case of age, estimated levels of social isolation and loneliness were not found to follow the same trend among older Canadian men and women. The NIA's Ageing in Canada Survey found that there are no major differences between older Canadian men and women in their reported experiences of social isolation. Conversely, there are differences in reported feelings of loneliness between Canadian men and women aged 50 years and older, with older women reporting experiencing greater levels of loneliness.

- Among Canadians aged 50 years and older, about the same share of men and women are considered to be socially isolated based on the LSNS-6 (scoring less than 12).
 - 42% of Canadian men aged 50 years and older could be classified as socially isolated compared to 40% of Canadian women of the same age.
- The share of older men and women with the strongest social networks or who are the least socially isolated is also the same in Canada based on the LSNS-6.
 - Keeping in mind that higher scores on the LSNS-6 indicate stronger social networks and less isolation, the proportion of Canadians aged 50 years and older who scored above 20 on the LSNS-6 was 9% among both men and women.

- When it comes to feelings of loneliness, women report experiencing higher levels of loneliness than men among older Canadians.
 - Overall, 63% of Canadian women aged 50 years and older report that they are either somewhat lonely or very lonely, while the share is 53% among Canadian men of the same age.
 - In particular, while **43**% of Canadian women aged 50 years and older are somewhat lonely (scoring 4–6 on the HLS-3), the share of Canadian men of the same age who are somewhat lonely is **37**%.
 - Most concerningly, one in five (20%) Canadian women aged 50 years and older report that they are very lonely (scoring 7–9 on the HLS-3). Correspondingly, the share of Canadian men of the same age who are very lonely is 16%.
 - On the other hand, while nearly half (47%) of Canadian men aged 50 years and older are not lonely (scoring 3) based on the HLS-3, the share of Canadian women of the same age who are not lonely is only 37%.

There are various possible reasons as to why older women in Canada report greater levels of loneliness than men. For one, women live longer and are more likely to experience widowhood, leaving them without the social support they once had from their spouse.42 Women are also more likely to prioritize maintaining social ties and have higher expectations of social contact, meaning that any deficits in contacts may be more strongly felt and lead to higher levels of subjective loneliness. 43,44,45,46 In addition, women tend to be more willing to acknowledge and disclose negative feelings, which could lead more women to report their feelings of loneliness. 47,48,49

However, research shows that women may also have an easier time establishing and maintaining close relationships, 50,51 and tend to have larger, more diverse social networks than men, with more meaningful relationships they can count on for support.52,53 This would challenge the notion that women will report more loneliness than men. Nevertheless, given that subjective feelings of loneliness can arise separately from objective experiences of social isolation^{54,55} yet independently predict mortality,56,57 the higher reported feelings of loneliness among older women in Canada are and remain a cause for concern.



How Do Family Ties Shape Social Isolation and Loneliness among Older Canadians?

The presence of family ties appears to be especially important in protecting against social isolation and loneliness among older Canadians. Specifically, the NIA's Survey found that the presence of both partnerships and children appears to have considerable benefits in old age, while not having a partner or children appears to contribute to greater experiences of social isolation and feelings of loneliness.

Among older Canadians, those who have a partner (either through marriage or some other stable partnership) report being less socially isolated compared to those who are single (either never married, divorced or widowed). Those who are partnered also tend to report far fewer feelings of loneliness. The NIA's Ageing in Canada Survey found that among partnered older Canadians, almost half of non-partnered Canadians reported being socially isolated and just under one-third were very lonely.

- Having a partner has some protective effect on experiences of social isolation among older Canadians.
 - 38% of older Canadians in a partnership were classified as socially isolated on the LSNS-6 (scoring less than 12), while 47% of those who were non-partnered reported the same (scoring less than 12 on LSNS-6).

- Similarly, when it comes to feelings of loneliness, older Canadians with a partner report experiencing much lower levels of loneliness than those without a partner.
 - Overall, 50% of partnered
 Canadians were either somewhat
 lonely or very lonely, while the
 share is 70% among non-partnered
 Canadians.
 - **50%** of all partnered Canadians were not at all lonely according to the HLS-3 (scoring 3), while **30%** of those non-partnered scored the same.
 - Comparatively, **28%** of all non-partnered older adults reported being very lonely on the HLS-3 (scoring 7–9) and only **12%** of married/partnered respondents reported the same (scoring 7–9).
- Among participants, both partnered and non-partnered, the oldest Canadians (aged 80 years and older) were less isolated.
 - Among those partnered, 26% of those aged 80 years and older were socially isolated (scoring less than 12 on LSNS-6), compared to 40% of those aged 50-64 years.
 - Among those non-partnered, 34% of those aged 80 years and older were socially isolated (scoring less than 12 on LSNS-6), compared to 52% of those aged 50-64 years.

- Among participants, both partnered and non-partnered, the oldest Canadians were less lonely.
 - Among those partnered, only 4% of those aged 80 years and older were very lonely (scoring 7–9 on HLS-3), compared to 16% of those aged 50-64 years.
 - Among those non-partnered, 16% of those aged 80 years and older were very lonely (scoring 7–9 on HLS-3), compared to 34% of those aged 50–64 years.

Research demonstrates that marriages and stable partnerships typically act as built-in social support networks and, thus, older adults who fall into those classifications tend to report less isolation and loneliness on the whole.^{58,59} Social support tends to be considered more effective when it comes from individuals who are as "socially similar" as partners are.60 Not only does spousal support take precedence over other sources, but it is also considered to be qualitatively different and generally superior. 61 A partner's ability to provide appropriate assistance, attention, care and understanding is critical to the maintenance of satisfying interpersonal relationships.⁶² At the same time, the experiences of marital transitions, such as divorce or widowhood, are central to the shaping of the psychological wellbeing and, thus, to increased feelings of loneliness in later life. 63,64 Older adults who experience marital transitions tend to experience greater feelings of loneliness when some of their previous social connections become detached and they subsequently find themselves

socially isolated from their original networks.^{65,66}

It is important to note, however, that there is something to be said for individuals in negative or unhappy marriages, as well as those who live in what is called "chosen singlehood" and those who have never married. Unhappy marriages, of course, may not present the same social support as happy ones, and adults who have chosen to remain single (or have always been single) have likely had time to develop strong social support networks and often report having a "chosen" family. This caveat is reflected in the NIA's 2022 Ageing in Canada Survey data, as the oldest group (80 years and older) of non-partnered Canadians is only **34%** socially isolated, compared to **52%** of those aged 50-64 years of age that are non-partnered. Older Canadians may have the ability to develop stronger networks outside of typical marital partnerships over time and, thus, are less likely to report being socially isolated.

Furthermore, older Canadians who have children tend to be less socially isolated and are not as lonely compared to those without any children. Those without children were found to be more socially isolated and lonelier overall. While the difference in loneliness scores is not incredibly vast and tends to represent a small number of respondents of both groups, social isolation represents a significant concern for *both* parents and childless Canadians.

The 2022 NIA Ageing in Canada Survey found that:

- While older parents report that they have a network of family and friends that they can count on, more than three in 10 older Canadians with children are considered to be socially isolated on the LSNS-6. Older Canadians without children, however, are much more likely to report being socially isolated.
 - **37%** of older Canadians with children were socially isolated according to the LSNS-6 (scoring less than 12).
 - Over half (52%) of respondents without children were socially isolated according to the LSNS-6 (scoring less than 12).
- When it comes to older Canadians with or without children, those without were found to be more likely to report having increased feelings of loneliness.
 - **16%** of those with children were considered to be very lonely by the HLS-3 (scoring 7–9).
 - Among those without children, nearly one-quarter (24%) were found to be very lonely by the HLS-3 (scoring 7-9).

While having children is incredibly relevant for protecting against experiencing social isolation and loneliness among older adults given their tendency to provide a regular source of emotional support and informal caregiving, it is important to recognize the social and cultural contexts that likely bolster its influence. First and foremost,

existing research has proven that large increases in social contacts tends to be larger in countries (and societies) with stronger filial norms.^{67,68,69} Filial norms represent the obligation imposed on adult children where they must defer to a parent's wishes and meet their parent's needs. This role not only includes contact with parents, having shared living arrangements and providing routine care, but also involves providing physical and emotional support and financial help; especially when parents become older adults. This responsibility also includes more comprehensive efforts to ensure a parent's safety, health, emotional well-being, sociability and continued integration in society through contact with the outside world.70,71

As well, research in the Canadian context emphasizes the particular importance of having children for non-partnered men and widowed women. They are an important source of social support that is otherwise missing for those without a marital partner.⁷² This further highlights the significance of marital status and helps explain the findings from the NIA's survey. Finally, it is important to recognize social events when understanding the role that children play in alleviating isolation and loneliness. For example, COVID-19 played a unique role at the time that this data was collected given that contact between parents and their children were likely to have increased during this time.⁷³

How Does Socioeconomic Status Shape Experiences of Social Isolation and Loneliness among Older Canadians?

Socioeconomic status was found to be an important predictor of social isolation and loneliness among older Canadians. Socioeconomic status (SES) is the position of an individual or group on the *socioeconomic scale*. This position is determined by a combination of social and economic factors such as income. amount and kind of education, type and prestige of occupation, place of residence and — only in some societies or parts of society — ethnic origin or religious background. For the purposes of this report on social isolation and loneliness, independent measures (that were reported in the NIA's 2022 Ageing in Canada Survey) were grouped by education attainment, income security and employment status as the factors that contribute to one's SES level.

Social isolation maintains a complex interaction between socioeconomic power and inequalities.74 Wealth (which is fed by educational attainment and employment status and is indicative of income security), plays a central role in shaping the living conditions and physical/social environments that provide access to and the opportunity to create, experience and maintain social connections.75 Researchers have also identified health-related behaviours as playing a role in the relationships between socioeconomic status and social isolation. 76,77,78 In particular, people with low SES tend to have worse health-risk

behaviours and, thus, are more likely to experience social isolation and feelings of loneliness.⁷⁹ This bi-directional relationship is expanded upon in the section below.

In an assessment of educational attainment, the NIA's 2022 Ageing in Canada Survey measured whether respondents had: less than a high school diploma; a high school diploma; college or technical school diploma; and a university or graduate degree. Overall, the higher one's reported level of education was, the less socially isolated or lonely they scored on the LSNS-6 and HLS-3.

- Older Canadians who had attained post-secondary education were less socially isolated than their lesseducated counterparts.
 - Nearly one-third (32%) of individuals with a university or graduate degree were socially isolated, according to the LSNS-6 (scoring less than 12).
 - Comparatively, 40% of those with a college or technical diploma, 44% of individuals with high school, and 48% of individuals with less than a high school education reported being socially isolated (scoring less than 12 on the LSNS-6).

- Despite representing a small portion of older Canadians, those with higher educational attainment report experiencing lower levels of loneliness than those with less advanced degrees.
 - Overall, 57% of older Canadians with less than a high school diploma were classified as lonely (scoring either somewhat or very lonely on HLS-3), while 60% of those with a university of graduate degree reported the same.
 - Only one-quarter (15%) of respondents with a university or graduate degree were found to be very lonely on the HLS-3 (scoring 7–9), while the remaining categories saw corresponding increasing proportions of participants.
 - Specifically, 18% of those with a college or technical diploma,
 19% of those with a high school diploma, and 21% of respondents with less than a high school education were classified as very lonely on the HLS-3 (scoring 7–9).

The influence of educational attainment as it relates to social isolation and loneliness is thought by existing research to be a relatively indirect one. It is important to analyze this factor from a longitudinal, life-course perspective given that, typically, individuals almost always achieve their highest educational level at early stages of their lives and well before later-life loneliness is experienced. The events experienced, roles adopted and decisions made throughout one's time in education-related spaces influence

the biographical development of their life trajectories. More often than not, increased time spent in higher education creates more opportunities for meaningful social connections to form and last into late adulthood. As well, education is considered to have some measurable effect on income security and employment status, which further influences levels of social isolation and loneliness.

Income security, defined as one's ability to pay for their basic needs without fear of losing their income, also appears to significantly inform levels of social isolation and loneliness across all older Canadians. Respondents answered on a scale of good enough ("income secure"), just enough, not enough or impossible ("income insecure"). Large differences were observed between those who reported being incredibly income insecure and those who maintained high income levels.

- Among Canadians aged 50 years and older, those the highest level of income security are the least likely to report social isolation.
 - Almost two-thirds (62%) of people who reported being income insecure were considered socially isolated by the LSNS-6 (scoring less than 12), while only three in 10 (31%) of those income secure were socially isolated (scoring less than 12 on the LSNS-6).

- Income insecure Canadians aged 50 years and older also report higher levels of loneliness when compared to their high-income counterparts.
 - Overall, 87% of income insecure Canadians were lonely (scoring either somewhat or very lonely on HLS-3), compared to only 44% of income secure Canadians.
 - However, the proportions who classified as somewhat lonely (scoring 4–6 on HLS-3) were more similar between those income secure and income insecure. Specifically, 35% and 39%, respectively.
 - Nearly half (48%) of those who were income insecure were found to be very lonely on the HLS-3 (scoring 7–9), while only 9% of income secure respondents reported the same (scoring 7–9 on the HLS-3).
 - On the other hand, over half (56%) of income secure Canadians were not lonely at all (scoring 3 on HLS-3).

The mechanisms that drive those with greater income security to experience lower levels of social isolation and fewer feelings of loneliness, primarily rests upon the social strata that these individuals occupy. That is to say, their social status likely allows them opportunities that their lower income counterparts do not have. For example, low-income Canadians typically live in geographic areas that are not accessible or conducive to creating and maintaining social networks.⁸¹ As well, these individuals tend to lack an ability to connect with

others via experiences in education or their place(s) of employment. Similarly, income insecure adults usually cannot access or afford a vehicle, and poor public transportation in their community prevents access to social activities. Older adults who reside in low-income or social housing, on the other hand, are (typically) living in high-rise buildings with little to no access to amenities. For those older adults with mobility issues, this can lead to feelings of confinement and loneliness.

Current research also suggests that one's employment status, or the "having of a job," is crucial for developing community and the fostering of positive social networks.88,89 Having paid work offers protection against loneliness, with the greatest benefit typically seen in full-time employment.90 This existing scholarship also hypothesizes and supports a bi-directional relationship between loneliness/isolation and unemployment — that unemployment perpetuates loneliness and loneliness simultaneously contributes to extended periods of unemployment.91 Older Canadians in this survey, however, demonstrate minimal differences in social isolation and loneliness when they are both employed and unemployed.

The 2022 NIA Ageing in Canada Survey found that:

- The exact same amount (**41%**) of those working and not working were socially isolated (scoring less than 12 on the LSNS-6).
- **39%** of people not working were somewhat lonely (scoring between 4–6 on HLS-3), while **42%** of those who were employed reported the same.
- 19% of people not working were very lonely (scoring between 7–9 on HLS-3), while 17% of those who were employed reported the same.

When this data is aggregated based on age, the results begin to shift. Some striking differences arise between older and younger adults who are employed and unemployed. In particular, the opposite relationship between employment and isolation is observed among Canadians aged 50-79 years and the oldest Canadians aged 80 years and older. While those who had a job were less isolated than those working among Canadians aged 50-79 years, among the oldest Canadians aged 80 years and older, those who are employed report higher levels of isolation. However, the oldest Canadians aged 80 years and older fare better than those aged 50-79 years regardless of whether they are employed or not.

The 2022 NIA Ageing in Canada Survey found that:

- Among Canadians aged 50–64 years, 42% of those still employed were socially isolated (scoring less than 12 on the LSNS-6), compared to 49% of those who were not working.
- Similarly, among Canadians aged 65– 79 years, 38% of those working were socially isolated (scoring less than 12 on the LSNS-6), compared to 40% of those who were not working.
- On the other hand, among the oldest Canadians aged 80 years and older, 33% of those still employed were socially isolated (scoring less than 12 on the LSNS-6), compared to 30% of those of who were not working.

Some existing research has identified that this trend may be observable, by noting that while all older adults may lose social network size after both short and long-term periods of unemployment, their frequency of social contact actually *increases* during these periods of unemployment.92 As well, stronger social ties between family and close friends tend to be unaffected by periods of unemployment.93 This is reflected in the data presented above from the NIA's survey. While our data does not aggregate based on both income and unemployment, existing research also notes that employment status has some measurable effect on income security, which further intervenes on levels of social isolation and loneliness.94

How Does One's Health Shape Experiences of Social Isolation and Loneliness among Older Canadians?

It is important to understand how overall health status can influence the experience of social isolation and loneliness. While the severely negative consequences of this relationship have been well documented throughout scholarly literature, the NIA survey utilized two measures indicative of health status to quantify the effects. First, participants' self-reported health status is discussed, followed by a measure of one's ability to live independently.

Levels of social isolation and loneliness were found to be markedly different across the self-reported health status of older Canadians. Responses were measured on a scale from excellent, to good, to poor. The higher rated one's health status was, the less likely they were to report being socially isolated or experiencing feelings of loneliness. Despite this, social isolation and loneliness remain significant concerns regardless of health status, with a sizeable share still scoring less than 12 on the LSNS-6 and between 7–9 on the HLS-3.

- Canadians aged 50 years and older with poor health were more likely to be considered socially isolated by the LSNS-6 (scoring less than 12).
 - Over half (51%) of those with poor self-reported health were socially isolated, while 42% of those with good health and only one third (33%) of those with excellent health reported the same (scores less than 12 on the LSNS-6).
- Canadians aged 50 years and older with good health reported even less loneliness than social isolation.
 - Only 16% of those with good health and a mere 10% with excellent health, reported being very lonely on the HLS-3 (scoring between 7–9).
 - On the other hand, among individuals with poor health, onethird (34%) were considered to be feeling very lonely (scoring between 7–9 on HLS-3).



There is a significant body of research that connects one's reported health status with the degree to which they experience social isolation and feelings of loneliness. This relationship is often described as being bi-directional. This means that poor health can also lead to increased social isolation and loneliness, while social isolation and loneliness can lead to poor health outcomes. First and foremost, physical and cognitive impairments impact communication and mobility, thus deteriorating one's ability to maintain social ties. 95,96 At the same time, however, social isolation acts as a risk factor for several negative health consequences, ranging from depression to coronary heart disease. 97,98,99,100,101,102 Individuals who are socially isolated are similarly less likely to exercise, eat fruits or vegetables, or engage in healthpromoting behaviour. 103,104,105,106,107,108 These negative health conditions then, in turn, exacerbate social isolation and loneliness when these individuals are unable to visit with their friends, see their family or engage with the community. 109,110,111,112,113,114

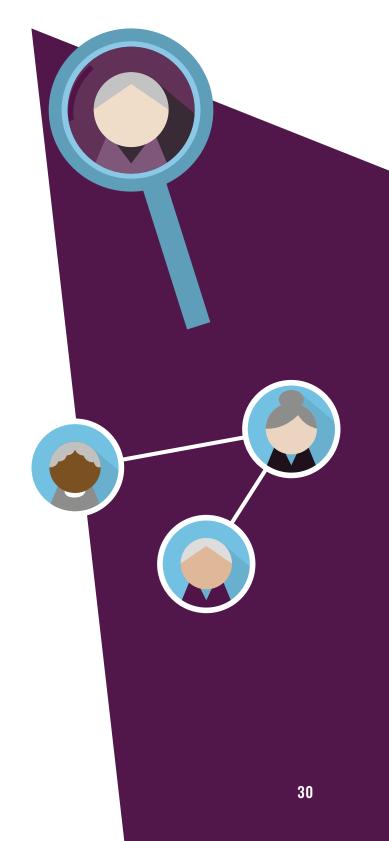
As a measure of respondents' independent living status, the NIA survey asked several questions to determine whether each respondent was still living independently in their own home as opposed to in the home of someone else like a family member or in other types of dwellings like a care setting. This measure is a general signal of one's health and how older Canadians are faring as it reflects whether or not participants are actually *able* to, or healthy enough to, live alone.

Within existing research, the connection between living alone and isolation/ loneliness is thought to be relatively clear, with most everyone who is isolated typically living alone. Contrary to this scholarship, the responses to the NIA survey showed that those living independently were less like to experience social isolation and have feelings of loneliness.

- Canadians aged 50 years and older who are not living independently in their own homes were found to possess higher levels of social isolation (scoring less than 12 on LSNS-6).
 - 48% of those who were not living independently were socially isolated, compared to 40% of Canadians who were still living independently.
- Individuals not living independently were also found to experience increased feelings of loneliness (scoring between 7–9 on the HLS-3).
 - 44% of individuals who were not living independently were somewhat lonely and 27% were very lonely.
 - This is in comparison to 16% of those still living independently being very lonely and 45% not reporting loneliness at all.

Despite existing research widely accepting a simple, direct relationship between independent living and social isolation or loneliness, the survey data would suggest that the link is not as clear and instead far more complex. 116,117,118,119 Perhaps there are more positive aspects to living alone than we may have initially realized — for some individuals it provides them with more motivation to seek out social connections. 120 As well, the degree to which older Canadians experience social isolation and loneliness is still dependent on numerous other pre-existing social factors and conditions that interact with one's living situation to initiate either high levels of isolation or increased feelings of loneliness. 121,122 Some suggest that it is the social environment rather than the objective number of people living in one's house that fosters either social isolation or contact and mutual support. 123,124

In addition to the discussion above, the NIA's measure of independent living is certainly more reflective of their health status — where those who can live alone are healthier and those who cannot live alone are less healthy. Thus, the underlying mechanism captured by the measure of independent living likely aligns more clearly with the discussion of self-reported health status, which highlights how poor health maintains a bi-directional relationship with social isolation and loneliness.



How Does Immigration Status Influence Older Adults' Experience of Social Isolation and Feelings of Loneliness?

Canada is known as an incredibly multicultural society. Currently, there is an increasing number of older persons who came to Canada as immigrants or refugees. In 2011, 21% of the total Canadian population was internationally born.¹²⁵ This proportion is projected to increase to 40% by 2055. 126 Immigrant-Canadians also are increasingly making up a larger share of our older population — currently representing 30% of all older adults — as individuals who entered Canada in their youth begin to enter old age. 127 Given this, it is incredibly important to reduce experiences of social isolation and loneliness in this particular and growing portion of the population.

Existing scholarly research typically identifies migration from one country to another as a social disruption and can lead to increased loneliness. 128,129 Immigrants, and especially new immigrants, may demonstrate higher levels of social isolation and increased feelings of loneliness given the barriers that they encounter — these include culture shock, difficulties finding employment and language barriers. 130,131 Other risk factors for new immigrants include experiencing higher levels of poverty, limited access to transportation, tendency to be caregivers and a lack of awareness of available services. 132 The consequences of social isolation and Ioneliness in older immigrant-Canadians are consistent with those experienced by

older adults more broadly. These include depression, social anxiety, poor eating habits, coronary heart disease and stroke, as well as an inability to participate in the labour market. 133

To measure immigration status, the NIA survey included a question on how many generations they had been in Canada, with respondents answering that: they were born in another country; they were born in Canada, but their parents were not (i.e., second generation); or both themselves and their parents were born in Canada, but their grandparents were not (i.e., third generation). The survey findings, however, found that immigration status had minimal impact on levels of social isolation and feelings of loneliness among older Canadians.

- Among immigrants aged 50 years and older, 40% were classified as socially isolated, compared to 41% of second generation and 42% of third generation Canadians of the same age.
- 16% of immigrants were very lonely (scoring between 7–9 on the HLS-3), while 19% and 18% of second and third generation Canadians, respectfully, reported the same.

While existing research would suggest that older individuals who have migrated to Canada may be more susceptible to experiencing social isolation and loneliness, there are a number of possible explanations as to why the NIA's data reveals similar levels among immigrant and Canadian-born older adults. One possible explanation is that our survey did not distinguish between the experiences of recent and long-term immigrants in Canada. The various challenges and disruptions that immigrants often face upon arriving to a new country, and that can contribute to experiences of isolation and feelings of loneliness, may subside over time as the number of years spent in Canada increases. 134 As a result, the risks of social isolation and loneliness may be higher and especially felt among recent immigrants in particular, while the experiences of established and longterm older immigrants become more comparable to those of Canadian-born older adults.

Another and related explanation may be that Canada has indeed been quite successful in socially integrating large numbers of immigrants and refugees.¹³⁵ Evidence demonstrates that second- or third-generation Canadians tend to show few significant differences in terms of socioeconomic status or educational attainment when compared to those with deeper roots in the country. 136 As well, perhaps Canadian immigrants are provided with opportunities for social networking that, in turn, develop strong, supportive networks in their particular cultural diaspora. 137,138,139 These welcoming spaces and places are key to ensuring that immigrants avoid isolation and

loneliness. 140,141 More recent immigrants may also exhibit minimal differences compared to long-term residents if provided with financial support, employment, affordable housing and accessible healthcare. 142,143

Finally, another possible explanation that must be considered is that perhaps the sample of older Canadians selected for this survey may not be entirely representative of the full range of experiences of older immigrants in Canada. By conducting the survey online, and using an existing pool of recruits, the 2022 NIA Ageing in Canada Survey only reached those with some level of digital literacy. This, of course, has implications for the education level, age and socioeconomic status of the sample.¹⁴⁴

Next Steps to Better Support Older Canadians and Address Social Isolation and Loneliness across Canada

As outlined throughout this report, social isolation and loneliness are serious issues that, at present, already impact a significant share of Canada's older population. But as the Canadian population continues to rapidly age in the coming decades and older persons make up a growing proportion of the population, the number of either isolated or lonely older adults is also expected to increase. This means that without concrete and immediate action, we can expect both the individual and societal consequences of loneliness and social isolation to become more severe in Canada.

Better supporting Canada's ageing population will require having effective strategies in place to both tackle the prevalence of social isolation and loneliness, and reduce their negative consequences. The NIA has outlined key considerations that can be used as next steps to help address the realities and challenges of social isolation and loneliness in Canada identified in this report.

report.

Canada Needs a National Strategy Addressing Social Isolation and Loneliness

In our 2022 report, titled *Understanding*Social Isolation and Loneliness Among
Older Canadians and How to Address
It, the NIA recognized the need for a
comprehensive and balanced approach to
addressing social isolation and loneliness
via support from Canada's federal
government.¹⁴⁵ The NIA specifically
recommended, and continues to advocate
for, the development of a national
strategy to address the growing issue
of social isolation and loneliness among
Canada's ageing population.

Canada should follow the lead of other countries that have implemented national strategies, such as Australia, Japan, New Zealand, the United Kingdom and the United States, and learn from the successful examples they have set. In order to meet the increased social support needs of older Canadians, the federal government should take a central leadership role, with concerted coordination between the provinces, territories and municipalities. The federal government must act as a standard-setter, catalyst and funder for important social change. They are critical to ensuring that necessary, meaningful change

comes to fruition for lonely and isolated older Canadians. In our 2022 report, the NIA specifically presented six policy recommendations that would be required to advance a national strategy — these are yet to be achieved and remain an important piece of the NIA's continued advocacy around these issues.¹⁴⁶

In addition to the recommendations outlined in the NIA's 2022 report, a national strategy to combat social isolation and loneliness must adopt a life course perspective. While the NIA has a particular focus on the experiences of older Canadians, and social isolation and loneliness are particularly dangerous in older age, it is important to recognize and target the cumulative stress and damage that result from the long-term experience of isolation and loneliness. A national strategy that contemplates the importance of social networks and connections throughout the life course, which also promotes intergenerational relationships, would thus have the potential to be incredibly valuable. Indeed, the problem of social isolation and loneliness cuts across age groups, with younger Canadians also experiencing loneliness at an alarmingly high rate, especially in the aftermath of the COVID-19 pandemic.¹⁴⁷ This is not to say that there are not unique circumstances that enable more dangerous outcomes in older adults, but a truly comprehensive and effective approach must include Canadians of all ages.

It is important to note that, in recognition of several provincial initiatives that already exist to target social isolation and loneliness, a patchwork of

provincial and territorial legislation will not be comprehensive enough and cannot represent a unified strategy.

By developing a national strategy, the federal government can begin to establish comprehensive pan-Canadian initiatives and best practices that are needed to support more coordinated and effective programs and interventions, which address the high levels of social isolation and loneliness experienced by older Canadians at the national, regional and local levels.

Canada Needs to Invest in Research and the Evaluation of Programs and Interventions to Establish Sustainable Best Practices to Better Address Social Isolation and Loneliness

As the findings covered in this report have demonstrated, several new, surprising and significant results have emerged from the 2022 NIA Ageing in Canada Survey about the experiences of social isolation and loneliness of older adults across Canada. This introduces an imperative to draw on best practices to begin reducing social isolation and loneliness, and implementing interventions that adequately address the unique experiences and challenges faced by particular groups of older Canadians.

Currently, however, there are significant gaps in the evidence allowing for the effectiveness of programs and initiatives targeting social isolation and loneliness to be concretely assessed. This is also true for some of the more popular strategies currently being implemented to target

social isolation and loneliness in the community, such as social prescribing programs. 148,149,150 The lack of evidence about how, and the extent to which, various interventions successfully help reduce and prevent social isolation and loneliness has resulted in an incomplete understanding of best practices for addressing social isolation and loneliness. In addition, it makes it challenging for organizations and the broader sector to justify continued support for these programs. As such, government officials and policymakers should recognize the significant evidence gaps and provide long-term financial investment to support the continued development and sustainability of programs, as well as the assessment of their impacts. Increased funding and research evaluating how existing programs and interventions perform in the long-term will, in turn, make it possible for sustainable best practices to be identified and disseminated to address social isolation and loneliness at the national, regional and local levels.

Most research in this field has focused on identifying the risk factors for social isolation and loneliness, as well as understanding their social and health consequences rather than the effectiveness of interventions themselves. 151 There are numerous challenges that contribute to the lack of research and evidence on the effect of social isolation and loneliness interventions. Several are, in fact, practical in nature. These range from levels of complexity in measuring health and social outcomes to resourcing constraints that make data collection incredibly difficult.152 Also, given that

interventions are typically designed to be different depending on the needs of each individual and the resources available in each local area, it has (admittedly) been quite difficult to determine whether programs are effective on a large scale.¹⁵³

A number of steps could be taken to begin addressing the major evidence gaps around best practices for addressing social isolation and loneliness. First, consistent definitions and measures should be applied across the field. Current heterogenous definitions of social isolation and loneliness make it challenging to assess and compare the efficacy of various interventions. Second, research that focuses on evaluating the long-term benefits of interventions is also needed. Currently, most of the studies reporting on interventions only highlight short-term, follow-up outcomes with the long-term impacts relatively unknown. In addition, there is a need for a better understanding of the mechanisms through which interventions are responsible for affecting social isolation and loneliness. Currently, the exact mechanisms that would explain the reason certain interventions see improvements in connectedness or feelings of loneliness tends to be unclear — necessitating further research into why some interventions are effective while others are not.¹⁵⁴ Systematic reviews on the subject have discussed important limitations of the evaluations that do exist, namely, that the quality of evidence is poor, intervention programming tends to be small in scale and they have not been rigorously evaluated. 155

One popular strategy that is being used to target social isolation and loneliness

in the community is the use of social prescribing programs. For these in particular, the limited evidence available demonstrates that these programs are beneficial, but that the benefits may be minimal. However, it is important to recognize that this is only a partial picture due to unavailable evidence, 156 and that without additional research evaluating the full impact of these programs, the extent to which they actually help address and prevent social isolation and loneliness may not be fully captured. At present, most of the existing evidence also focuses on the degree of impact at the individual level, rather than at the system level. 157 As well, social prescribing programs that operate within the traditional health care system are more likely than others within the community context to be formally evaluated — given the need to demonstrate effectiveness and value to funders and readily available validated tools to measure health outcomes.¹⁵⁸ However, given the important role of the community sector in combatting the growing issue of social isolation and Ioneliness among ageing Canadians, understanding how these programs operate outside of the traditional health care system must increasingly be evaluated and better understood.

Considering Emerging Promising Practices and Areas of Interest

In addition to developing a national strategy and improving the evidence base on interventions, promising approaches for addressing social isolation and loneliness can also be further considered, developed and leveraged to combat these issues. The following three emerging promising practices have the potential to seriously limit the degree to which older Canadians experience social isolation and loneliness.

Age-Friendly Communities



When examining the ways in which our communities and cities are designed, it becomes clear that older adults are not taken into consideration.

Typically, we see geographies that are inaccessible, inequitable and unsuitable for older Canadians. Through the design, creation and implementation of agefriendly communities (AFCs), Canada's communities can become much more inclusive of older adults.

AFCs typically follow the World Health Organization's (WHO's) model that defines an AFC as a community that recognizes the diversity among older persons, promotes their inclusion in all areas of community life, respects both their decisions and lifestyles, and simultaneously anticipates and responds to ageing-related needs and desires.¹⁵⁹

There are eight domains that AFCs are primarily centred around. These include:

- **1.** Outdoor spaces and public buildings that are pleasant, clean, secure and physically accessible;
- **2.** Public transportation that is accessible and affordable;
- Housing that is affordable, appropriately located, well built, well designed and secure;
- Opportunities for social participation in leisure, social, cultural and spiritual activities with people of all ages and cultures;
- **5.** Older people are treated with respect and are included in civic life;
- Opportunities for employment and volunteerism that cater to older persons' interests and abilities;
- **7.** Age-friendly communication and information are available; and
- **8.** Community support and health services are tailored to older persons' needs. 160

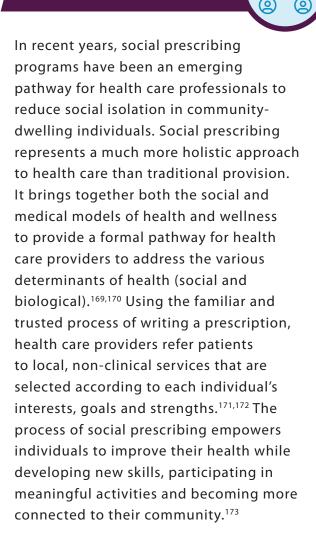
AFCs are places that recognize the great diversity among older persons, respond flexibly to ageing-related needs and preferences, and strongly encourage active and healthy ageing — whatever that means for every individual — by optimizing opportunities for health, participation and security.¹⁶¹ The main goal of AFCs is to enhance quality of life as people age. Most importantly for the purposes of this report, the adapted environments and services of an AFC encourage older adults to engage, frequently, in community activities. 162 This culture then, in turn, allows older adults to foster strong, positive social connections.

In 2007, the WHO launched its AFCs initiative to foster a more thoughtful approach to the development of communities that could promote the health and well-being of people of all ages, and especially the ageing population. Since then, the Public Health Agency of Canada (PHAC) has played a significant role in advancing the WHO's AFCs initiative across Canada. For example, PHAC helped establish the Pan- Canadian Age-Friendly Communities Reference Group, which, since 2008, has played a leading role in developing and advancing the AFCs model across Canada. 163 PHAC also helped fund many of that group's strategic activities such as the development of the original WHO Age-Friendly Cities Guide¹⁶⁴ and the Pan-Canadian Age-Friendly Communities Milestone Guide¹⁶⁵ to help communities implement age-friendly requirements in their local settings, including in rural and remote communities.

To date, AFC development activities have taken place at various levels across Canada. For example, all 10 of Canada's provinces and one territory (the Northwest Territories) are promoting age-friendly community initiatives across Canada. 166 In addition, approximately 800 communities have launched age-friendly initiatives 167 through which they have learned to assess their level of "age-friendliness," how to integrate ageing perspectives into community planning and how to create age-friendly spaces and environments.

Globally, more than 1400 communities across 51 countries have launched AFCs initiatives as part of the WHO's Global Network for Age-friendly Cities and Communities.¹⁶⁸

Social Prescribing Programs



Scholars throughout the existing literature acknowledge that there is a relatively limited evidence base to make claims surrounding what is known about the benefits of social prescribing programs. Several investigations,

however, have revealed that, in general, social prescribing programs result in decreased levels of loneliness and social isolation overall. 174,175,176,177 In doing so, participants in these programs tend to report an increased sense of belonging to their communities, improved selfconfidence and self-worth, in addition to a new sense of pride, purpose and achievement. 178,179,180,181

Several provinces across Canada have begun to see social prescribing programs integrated into places where individuals receive traditional health care services. In particular, the NIA is aware of programs under development in both British Columbia and Ontario. In British Columbia, the provincial Ministry of Health has funded the "Seniors Social Prescribing Program," managed by the United Way, which targets older adults who experience social isolation, mental health concerns, poor physical health, are low-income, are part of marginalized communities (Indigenous/Métis/Inuit, 2SLGBTQIA+, etc.), and make frequent trips to the emergency room or primary care. 182 In Ontario, the "Rx: Community" project piloted social prescribing programs at numerous community health centres across the province.¹⁸³



Emerging AgeTech Solutions to Combat Social Isolation and Loneliness



AgeTech is defined as any form of digital technology that is built around the needs and wants of older adults, while simultaneously including them in all stages of the design process. These technologies span all typologies in an effort to improve the lives of older adults. The most common examples of AgeTech include general information and communication technology, video games, robotics, video conferencing, social networking sites, telecare, asynchronous peer support chat rooms and 3D virtual environments.^{184,185}

AGE-WELL, Canada's technology and aging network, profiled several specific, promising examples as well. First, Amintro — an online social platform and information hub for individuals aged 50 years and older. 186 FamliNet is also described as a user-friendly communication and private network application aimed to create a circle of support for older adults, their families and caregiving organizations. 187 Welbi is similarly highlighted as a means for institutional care providers (long-term care environments) to increase resident engagement and well-being. 188

TELUS Health has also recently introduced an encouraging addition to their suite of health-related applications. *Social Connect* is described as a user-friendly application that supports older adults in their homes, in care homes and in assisted-living facilities. ¹⁸⁹ Its mandate is to help provide

a sense of connectedness to older adults while maintaining self-reliance and reducing feelings of isolation, loneliness and boredom.¹⁹⁰

Existing research on the use of digital technologies suggests that technologybased interventions are demonstrating increasing promise in helping to address social isolation and loneliness among older adults. For example, a number of recent systematic reviews have shown that technology interventions such as audio and video communication and networking platforms can be used to reduce social isolation and improve connectedness and well-being among older adults. 191,192 Overall, however, like other technology-based solutions designed to support older adults and enable ageing in the right place, more research to determine their overall effectiveness is still needed. 193,194



Conclusion

This report has provided robust prevalence estimates of social isolation and loneliness among older Canadians based on findings from the 2022 NIA Ageing in Canada Survey. As the results from the NIA's survey reveal, social isolation and loneliness are significant problems for older Canadians. The findings suggest that as many as 41% older adults are socially isolated and up to 58% have experienced loneliness.

The NIA's Ageing in Canada Survey also reveals that while Canadians aged 80 years and older are the least likely to report being at risk of social isolation and report the lowest levels of loneliness when compared to Canadians aged 50–79 years, social isolation and loneliness remain at concerningly high levels among older Canadians regardless of age.

Moreover, both social isolation and loneliness are experienced by men and women, but women do appear to experience higher levels of loneliness than their male counterparts.

The high prevalence of social isolation and loneliness among older adults living in Canada, combined with the harmful impacts that both of these conditions have on health and well-being, underscores the pressing need for effective strategies

that combat the issue. In its previous report, Understanding Social Isolation and Loneliness Among Older Canadians and How to Address It, the NIA proposed that the Canadian federal government develop a comprehensive national strategy to address the growing issue of social isolation and loneliness in older Canadians, and offered a number of recommendations to help advance a national strategy. 195 The urgent need for Canada to adopt a national strategy remains, and the population-based figures revealed in this report only further emphasize that a comprehensive approach to address social isolation and loneliness with federal leadership and support is required.

Building on our previous recommendations, this report has also identified the need for sustainable investments in research and the evaluation of existing programs and initiatives, as well as emerging areas and promising practices that could potentially better support older adults who may be especially at risk, and address the growing issues of social isolation and loneliness in Canada. By facilitating the creation of more age-friendly communities, expanding the availability of social prescribing programs and supporting the development of useful technologies that could better address these issues, governments can continue efforts to reduce the prevalence and negative impacts of social isolation and loneliness across Canada.

References

- Wister, A., Beaulieu, M., Duffy, L., Gionet,
 S., Johnson, S.C., McGrath, H., et al.
 (2014), The National Seniors Council:
 Report on the Social Isolation of Seniors.
- Courtin, E., and Knapp, M. (2017). Social isolation, loneliness and health in old age: a scoping review. Health and Social Care in the Community, 25(3), 799–812. Retrieved from: https://doi.org/10.1111/ hsc.12311
- Rico-Uribe, L.A, Caballero, F.F., Martín-María, N., Cabello, M., Ayuso-Mateos, J.L., and Miret M. (2018). Association of loneliness with all-cause mortality: A meta-analysis. PLoS One, 13(1), 1–21. Retrieved from: https://doi.org/10.1371/journal.pone.0190033
- Holt-Lunstad, J., Smith, T.B., Baker, M., Harris, T., and Stephenson, D. (2015). Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review. Perspectives on Psychological Science, 10(2), 227– 237. Retrieved from: https://doi. org/10.1177/1745691614568352
- Gilmour, H., and Ramage-Morin, P.L. (2020). Social isolation and mortality among Canadian seniors. Health reports, 31(3), 27–38. Retrieved from: https://doi. org/10.25318/82-003-x202000300003eng
- Wister, A., Beaulieu, M., Duffy, L., Gionet,
 S., Johnson, S.C., McGrath, H., et al.
 (2014), The National Seniors Council:
 Report on the Social Isolation of Seniors.

- Courtin, E., and Knapp, M. (2017). Social isolation, loneliness and health in old age: a scoping review. Health and Social Care in the Community, 25(3), 799–812. Retrieved from: https://doi.org/10.1111/hsc.12311
- ⁸ Havens, B., Hall, M., Sylvestre, G., and Jivan, T. (2004). Social Isolation and Loneliness: Differences between Older Rural and Urban Manitobans. Canadian Journal on Aging, 23(2), 129–40. Retrieved from: https://doi.org/10.1353/cja.2004.0022
- Ohen-Mansfield, J., Shmotkin, D., and Goldberg, S. (2009). Loneliness in old age: Longitudinal changes and their determinants in an Israeli sample. International Journal of Psychogeriatrics, 21(6), 1160– 70. Retrieved from: https://doi. org/10.1017/S1041610209990974
- Cantarero-Prieto, D., Pascual-Sáez, M., and Blázquez-Fernández, C. (2018). Social isolation and multiple chronic diseases after age 50: A European macro-regional analysis. PLoS One, 13(10), 1–12. Retrieved from: https:// doi.org/10.1371/journal.pone.0205062
- Petitte, T., Mallow, J., Barnes, E., Petrone, A., Barr, T., and Theeke, L. (2015). A Systematic Review of Loneliness and Common Chronic Physical Conditions in Adults. Open Psychology Journal, 8(Suppl 2), 113. Retrieved from: /pmc/articles/ PMC4636039/

- Iliffe, S., Kharicha, K., Harari, D., Swift, C., Gillmann, G., and Stuck, A.E. (2007).
 Health risk appraisal in older people
 2: The implications for clinicians and commissioners of social isolation risk in older people. British Journal of General Practice, 57(537), 277–82.
- Kobayashi, K.M., Cloutier-Fisher, D., & Roth, M. (2009). Making meaningful connections: A profile of social isolation and health among older adults in small town and small city, British Columbia. Journal of Aging and Health, 21(2), 374–97. Retrieved from: https://doi.org/10.1177/0898264308329022
- Steptoe, A., Shankar, A., Demakakos, P., and Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. Proceedings of the National Academy of Sciences of the United States of America, 110(15), 5797–801. Retrieved from: https://doi.org/10.1073/pnas.1219686110
- Stickley, A., Santini, Z.I., and Koyanagi, A. (2017). Urinary incontinence, mental health and loneliness among community-dwelling older adults in Ireland. BMC Urology, 17(1). Retrieved from: /pmc/ articles/PMC5385037/
- Hodge, S., and Eccles, F. (2013). Loneliness, Social Isolation and Sight Loss A literature review conducted for Thomas Pocklington Trust.

- Shukla, A., Harper, M., Pedersen, E., Goman, A., Suen, J.J., Price, C., et al. (2020). Hearing Loss, Loneliness, and Social Isolation: A Systematic Review. Otolaryngology Head & Neck Surgery, 162(5), 622–33. Retrieved from: https://doi.org/10.1177/0194599820910377
- Mehrabi, F., and Béland, F. (2020). Effects of social isolation, loneliness and frailty on health outcomes and their possible mediators and moderators in community-dwelling older adults: A scoping review. Archives of Gerontology and Geriatrics, 90, 104119. Retrieved from: https://doi. org/10.1016/j. archger.2020.104119
- Rico-Uribe, L.A, Caballero, F.F., Martín-María, N., Cabello, M., Ayuso-Mateos, J.L., and Miret M. (2018). Association of loneliness with all-cause mortality: A meta-analysis. PLoS One, 13(1), 1–21. Retrieved from: https://doi.org/10.1371/journal.pone.0190033
- Holt-Lunstad, J., Smith, T.B., Baker, M., Harris, T., and Stephenson, D. (2015). Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review. Perspectives on Psychological Science, 10(2), 227–37. Retrieved from: https://doi. org/10.1177/1745691614568352
- Perlman D., and Peplau, L.A. (1998). Loneliness Research: Basic Concepts and Findings. In: Sarason B.R. (eds), editor. Social Support: Theory, Research and Applications. 24th ed. Springer. p. 571–81. Retrieved from: https://doi. org/10.1007/978-94-009-5115-0_15

- Hughes, M. E., Waite, L. J., Hawkley, L. C., and Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. Research on Aging, 26(6). Retrieved from: https:// 10.1177/0164027504268574
- Lubben, J., Blozik, E., Gillmann, G., Iliffe, S., von Renteln Kruse, W., Beck, J. C., and Stuck, A. E. (2006). Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. The Gerontologist, 46(4). Retrieved from: https://doi.org/10.1093/geront/46.4.503
- Lubben, J. E., (1988). Assessing social networks among elderly populations. Family & Community Health, 11. Retrieved from: https://www.jstor.org/ stable/44953053.
- Myagmarjav, S., Burnette, D., & Goeddeke Jr, F. (2019). Comparison of the 18-item and 6-item Lubben Social Network Scales with community-dwelling older adults in Mongolia. PloS One, 14(4). Retrieved from: 10.1371/journal.pone.0215523
- Lubben, J., Blozik, E., Gillmann, G., Iliffe, S., von Renteln Kruse, W., Beck, J. C., and Stuck, A. E. (2006). Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. The Gerontologist, 46(4). Retrieved from: https://doi.org/10.1093/geront/46.4.503

- Hughes, M. E., Waite, L. J., Hawkley, L. C., and Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. Research on Aging, 26(6). Retrieved from: https:// 10.1177/0164027504268574
- Hughes, M. E., Waite, L. J., Hawkley, L. C., and Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. Research on Aging, 26(6). Retrieved from: https:// 10.1177/0164027504268574
- Hughes, M. E., Waite, L. J., Hawkley, L. C., and Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. Research on Aging, 26(6). Retrieved from: https:// 10.1177/0164027504268574
- Steptoe, A., Shankar, A., Demakakos, P., and Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. Proceedings of the National Academy of Sciences, 110(15), 5797–801. Retrieved from: https://doi.org/10.1073/pnas.1219686110
- The UCLA 3-Item Loneliness Scale. (n.d.). Measuring Your Impact on Loneliness in Later Life. Retrieved from: https://www.icmha.org/wp-content/ uploads/2020/02/UCLA-Loneliness-Scale.pdf

- Taylor H. O. (2020). Social Isolation's Influence on Loneliness among Older Adults. Clinical Social Work Journal, 48(1), 140–151. Retrieved from: https://doi.org/10.1007/s10615-019-00737-9
- Cornwell, B., Laumann, E. O., and Schumm, L. P. (2008). The Social connectedness of older adults:
 A national profile. American Sociological Review, 73, 185–203.
 Retrieved from: https://doi.org/10.1177/000312240807300201
- Lang, F. R., Staudinger, U. M., and Carstensen, L. L. (1998). Perspectives on socioemotional selectivity in later life: How personality and social context do (and do not) make a difference. Journal of Gerontology, 53B, P21– P30. Retrieved from: https://doi. org/10.1093/geronb/53b.1.p21
- Lee, D. J., and Markides, K. S. (1990). Activity and mortality among aged persons over an eight-year period. Journal of Gerontology, 45, S39– S42. Retrieved from: https://doi. org/10.1093/geronj/45.1.s39
- Okun, M. A., and Keith, V. M. (1998). Effects of positive and negative social exchanges with various sources on depressive symptoms in younger and older adults. Journal of Gerontology, 53B, P4–P20. Retrieved from: https://doi.org/10.1093/geronb/53b.1.p4
- Pinquart, M., and Sörensen, S. (2003). Risk factors for loneliness in adulthood and old age—a metaanalysis. Nova Science Publishers.

- Elder, K., and Retrum, J. (2012).
 Framework for isolation in adults over 50. AARP Foundation. Retrieved June 16, 2014.
- Mund, M., Freuding, M. M., Möbius, K., Horn, N., and Neyer, F. J. (2020). The stability and change of loneliness across the life span: A meta-analysis of longitudinal studies. Personality and Social Psychology Review, 24(1), 24–52. Retrieved from: https://doi.org/10.1177/1088868319850738
- Mund, M., Freuding, M. M., Möbius, K., Horn, N., & Neyer, F. J. (2020). The stability and change of loneliness across the life span: A meta-analysis of longitudinal studies. Personality and Social Psychology Review, 24(1), 24–52. Retrieved from: https://doi. org/10.1177/1088868319850738
- Holt-lunstad J, Smith TB, Baker M, Harris T, and Stephenson D. (2015). Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review.
- Josselson, R. (1987). Finding herself: Pathways to identity development in women. San Francisco: Jossey-Bass.
- Dong, X., and Chen, R. (2017). Gender differences in the experience of loneliness in US Chinese older adults. Journal of Women & Aging, 29(2), 115-125. Retrieved from: https://doi.org/10.1080/08952841.2015 .1080534

- Jopp, D., Rott, C., and Oswald, F. (2008). Valuation of life in old and very old age: the role of sociodemographic, social, and health resources for positive adaptation. The Gerontologist, 48(5), 646–58. Retrieved from: https://doi. org/10.1093/geront/48.5.646
- Wang, Y., Jiang, W., and Wu, L.
 (2023). Association between age and loneliness in different residential type and gender groups: evidence from China. BMC Psychiatry, 23(1), 1–9. Retrieved from: https://doi.org/10.1186/s12888-023-04525-1
- Pinquart, M., and Sörensen, S. (2003). Risk factors for loneliness in adulthood and old age—a metaanalysis. Nova Science Publishers.
- Pinquart, M., and Sörensen, S. (2003). Risk factors for loneliness in adulthood and old age—a metaanalysis. Nova Science Publishers.
- Borys, S., and Perlman, D. (1985). Gender differences in loneliness. Personality and Social Psychology Bulletin, 11, 63–75. Retrieved from: https://doi. org/10.1177/0146167285111006
- Wang, Y., Jiang, W., and Wu, L. (2023). Association between age and loneliness in different residential type and gender groups: evidence from China. BMC Psychiatry, 23(1), 1–9. Retrieved from: https://doi. org/10.1186/s12888-023-04525-1
- Pinquart, M., and Sörensen, S. (2003). Risk factors for loneliness in adulthood and old age—a metaanalysis. Nova Science Publishers.

- Mullins, L. C., and Mushel, M. (1992). The existence and emotional closeness of relationships with children, friends, and spouses: The effect of loneliness among older persons. Research on Aging, 14, 448–70. Retrieved from: https://doi.org/10.1177/0164027592144002
- Antonucci, T. C., Akiyama, H., and Lansford, J. E. (1998). Negative effects of close social relations. Family Relations, 379-384. Retrieved from: https://doi.org/10.2307/585268
- ⁵³ Antonucci, T. C. (1990). Social support and social relationships. Handbook of aging and the social sciences, 205–26.
- Hughes, M. E., Waite, L. J., Hawkley, L. C., and Cacioppo, J. T. (2004).
 A short scale for measuring loneliness in large surveys: Results from two population-based studies. Research on Aging, 26(6), 655–72. Retrieved from: https://doi.org/10.1177/0164027504268574
- Hawkley, L. C., Burleson, M. H.,
 Berntson, G. G., and Cacioppo, J.
 T. (2003). Loneliness in everyday
 life: cardiovascular activity,
 psychosocial context, and health
 behaviors. Journal of Personality and
 Social Psychology, 85(1), 105. Retrieved
 from: https://doi.org/10.1037/0022 3514.85.1.105

- Pedrozo Campos Antunes, T., Souza Bulle de Oliveira, A., Hudec, R., Brusque Crocetta, T., Ferreira de Lima Antão, J.Y., de Almeida Barbosa, R.T., et al. (2019). Assistive technology for communication of older adults: a systematic review. Aging and Mental Health, 23(4):417–27. Retrieved from: https://doi.org/10.1080/13607863.2018.1426718
- Elmer, E.M. (2018). Social Isolation and Loneliness Among Seniors in Vancouver: Strategies for Reduction and Prevention A Report to the City of Vancouver and Vancouver Coastal Health City of Vancouver Seniors' Advisory Committee.
- Kislev, E. (2022). Aging, Marital Status, and Loneliness: Multilevel Analyses of 30 Countries. Research on Ageing and Social Policy, 10(1), 77–103. Retrieved from: https://doi.org/10.17583/rasp.8923
- Chiao, C., Lin, W., Chen, Y., and Yi, C. (2021). Loneliness in older parents: Marital transitions, family and social connections, and separate bedrooms for sleep. BMC Geriatrics, 21(590), 1–10. Retrieved from: https://doi.org/10.1186/s12877-021-02550-x
- Dehle, C., Larson, D., & Landers, J. E. (2001). Social support in marriage. American Journal of Family Therapy, 29(4), 307–24. Retrieved from: https://doi.org/10.1080/01926180126500
- Dehle, C., Larson, D., & Landers, J. E. (2001). Social support in marriage. American Journal of Family Therapy, 29(4), 307–24. Retrieved from: https://doi.org/10.1080/01926180126500

- Dehle, C., Larson, D., & Landers, J. E.
 (2001). Social support in marriage.
 American Journal of Family Therapy,
 29(4), 307–24. Retrieved from: https://doi.org/10.1080/01926180126500
- Kislev, E. (2022). Aging, Marital Status, and Loneliness: Multilevel Analyses of 30 Countries. Research on Ageing and Social Policy, 10(1), 77–103. Retrieved from: https://doi.org/10.17583/ rasp.8923
- Chiao, C., Lin, W., Chen, Y., and Yi, C. (2021). Loneliness in older parents: Marital transitions, family and social connections, and separate bedrooms for sleep. BMC Geriatrics, 21(590), 1-10. Retrieved from: https://doi.org/10.1186/s12877-021-02550-x
- Kislev, E. (2022). Aging, Marital Status, and Loneliness: Multilevel Analyses of 30 Countries. Research on Ageing and Social Policy, 10(1), 77–103. Retrieved from: https://doi.org/10.17583/ rasp.8923
- Chiao, C., Lin, W., Chen, Y., and Yi, C. (2021). Loneliness in older parents: Marital transitions, family and social connections, and separate bedrooms for sleep. BMC Geriatrics, 21(590), 1–10. Retrieved from: https://doi.org/10.1186/s12877-021-02550-x
- Baranowska-Rataj, A., and Abramowska-Kmon, A. (2019). Number of children and social contacts among older people: The moderating role of filial norms and social policy. European Journal of Ageing, 16, 95–107. Retrieved from: https://doi. org/10.1007/s10433-018-0469-0

- Bordone, V. (2009). Contact and proximity of older people and their adult children: A comparison between Italy and Sweden. Population, Space and Place, 15, 259–280. Retrieved from: https://doi.org/10.1002/psp.559
- Hank, K. (2007). Proximity and contacts between older parents and their children: A European comparison. Journal of Marriage and Family, 69, 157–73. Retrieved from: https://doi. org/10.1111/j.1741-3737.2006.00351.x
- ⁷⁰ Caro, F. G. (2006). Family and aging policy. Hoboken: Taylor and Francis.
- Schorr, A. L. (1960). Filial responsibility in the modern American family: An evaluation of current practice of filial responsibility in the United States and the relationship to it of social security programs. Washington, DC: U.S. Department of Health, Education, and Welfare, Social Security Administration, Division of Program Research.
- Penning, M. J., Wu, Z., and Hou, F. (2022). Childlessness and social and emotional loneliness in middle and later life. Ageing and Society, 1–28. Retrieved from: doi:10.1017/S0144686X22000824
- Arpino, B., Mair, C. A., Quashie, N. T., and Antczak, R. (2022). Loneliness before and during the COVID-19 pandemic are unpartnered and childless older adults at higher risk? European Journal of Ageing, 19, 1327–38. Retrieved from: https://doi.org/10.1007/s10433-022-00718-x

- Röhr, S., Wittmann, F., Engel, C.,
 Enzenbach, C., Witte, A. V., Villringer,
 A., Löffler, M., and Riedel-Heller,
 S. G. (2022). Social factors and
 the prevalence of social isolation
 in a population-based cohort.
 Social Psychiatry and Psychiatric
 Epidemiology, 57, 1959–68. Retrieved
 from: https://doi.org/10.1007/s00127-021-02174-x
- Röhr, S., Wittmann, F., Engel, C.,
 Enzenbach, C., Witte, A. V., Villringer,
 A., Löffler, M., and Riedel-Heller,
 S. G. (2022). Social factors and
 the prevalence of social isolation
 in a population-based cohort.
 Social Psychiatry and Psychiatric
 Epidemiology, 57, 1959–68. Retrieved
 from: https://doi.org/10.1007/s00127-021-02174-x
- Algren, M. H., Ekholm, O., Nielsen, L., Ersbøll, A. K., Bak, C. K., and Andersen, P. T. (2020). Social isolation, loneliness, socioeconomic status, and health-risk behaviour in deprived neighbourhoods in Denmark: A cross-sectional study. SSM Population Health, 10, 100546. Retrieved from: https://doi. org/10.1016/j.ssmph.2020.100546
- Algren, M. H., Ekholm, O., van Lenthe, F., Mackenbach, J., Bak, C. K., and Andersen, P. T. (2017). Health-risk behaviour among residents in deprived neighbourhoods compared with those of the general population in Denmark: A cross-sectional study. Health and Place, 45, 189–98. Retrieved from: https://doi.org/10.1016/j. healthplace.2017.03.014

- Algren, M.H., Bak, C.K., Berg-Beckhoff, G., and Andersen, P.T. (2015) Health-Risk Behaviour in Deprived Neighbourhoods Compared with Non- Deprived Neighbourhoods: A Systematic Literature Review of Quantitative Observational Studies. PLoS ONE 10(10): e0139297. Retrieved from: https://doi.org/10.1371/journal. pone.0139297
- Algren, M. H., Ekholm, O., Nielsen, L., Ersbøll, A. K., Bak, C. K., and Andersen, P. T. (2020). Social isolation, loneliness, socioeconomic status, and health-risk behaviour in deprived neighbourhoods in Denmark: A cross-sectional study. SSM Population Health, 10, 100546. Retrieved from: https://doi. org/10.1016/j.ssmph.2020.100546
- Fernández-Carro, C., and Lao, J. G. (2022). A life-course approach to the relationship between education, family trajectory and late-life loneliness among older women in Europe.

 Social Indicators Research, 162, 1345–63. Retrieved from: https://doi.org/10.1007/s11205-022-02885-x
- Stewart, M.J., Makwarimba, E., Reutter, L.I, Veenstra, G., Raphael, D., and Love, R. (2009). Poverty, sense of belonging and experiences of social isolation. Journal of Poverty, 13, 173–95. Retrieved from: https://doi. org/10.1080/10875540902841762
- Stewart, M.J., Makwarimba, E., Reutter, L.I, Veenstra, G., Raphael, D., and Love, R. (2009). Poverty, sense of belonging and experiences of social isolation. Journal of Poverty, 13, 173–95. Retrieved from: https://doi.org/10.1080/10875540902841762

- Stewart, M.J., Makwarimba, E., Reutter, L.I, Veenstra, G., Raphael, D., and Love, R. (2009). Poverty, sense of belonging and experiences of social isolation. Journal of Poverty, 13, 173–95. Retrieved from: https://doi. org/10.1080/10875540902841762
- Ontario Non-Profit Housing Association. (2016). Aging in place in social housing. Toronto: Ontario Non-Profit Housing Association. .
- Association. (2015). Strengthening social housing communities: helping vulnerable tenants maintain successful tenancies. Toronto: Ontario Non-Profit Housing Association.
- Ontario Non-Profit Housing Association. (2016). Aging in place in social housing. Toronto: Ontario Non-Profit Housing Association.
- Ontario Non-Profit Housing Association (2015). Strengthening social housing communities: helping vulnerable tenants maintain successful tenancies. Toronto: Ontario Non-Profit Housing Association.
- Morrish, N., Mujica-Mota, R., and Medina-Lara, A. (2022). Understanding the effect of loneliness on unemployment: Propensity score matching. BMC Public Health, 22, 740. Retrieved from: https://doi. org/10.1186/s12889-022-13107-x

- Morrish, N., and Medina-Lara, A. (2021). Does unemployment lead to greater levels of loneliness? A systematic review. Social Science and Medicine, 287, 114339. Retrieved from: https://doi.org/10.1016/j. socscimed.2021.114339
- Morrish, N., & Medina-Lara, A. (2021). Does unemployment lead to greater levels of loneliness? A systematic review. Social Science and Medicine, 287, 114339. Retrieved from: https://doi.org/10.1016/j. socscimed.2021.114339
- Morrish, N., Mujica-Mota, R., and Medina-Lara, A. (2022). Understanding the effect of loneliness on unemployment: Propensity score matching. BMC Public Health, 22, 740. Retrieved from: https://doi. org/10.1186/s12889-022-13107-x
- Rözer, J. J., Hofstra, B., Brashears, M. E., and Volker, B. (2020). Does unemployment lead to isolation? The consequences of unemployment for social networks. Social Networks, 63, 100–11. Retrieved from: https://doi. org/10.1016/j.socnet.2020.06.002
- Rözer, J. J., Hofstra, B., Brashears, M. E., and Volker, B. (2020). Does unemployment lead to isolation? The consequences of unemployment for social networks. Social Networks, 63, 100–11. Retrieved from: https://doi. org/10.1016/j.socnet.2020.06.002

- Gaille, D., Paugam, S., and Jacobs, S.
 (2003). Unemployment, poverty and social isolation. European Societies,
 5(1), 1–32. Retrieved from: https://doi.org/10.1080/1461669032000057668
- Elder, K., and Retrum, J. (2012).
 Framework for isolation in adults over
 AARP Foundation.
- Pinquart, M., and Sörensen, S. (2003). Risk factors for loneliness in adulthood and old age—a metaanalysis. Nova Science Publishers.
- Gilmour, H., and Ramage-Morin, P.L. (2020). Social isolation and mortality among Canadian seniors. Health reports, 31(3), 27–38. Retrieved from: https://doi.org/10.25318/82-003x202000300003-eng
- Hawton, A., Green, C., Dickens, A. P., Richards, S. H., Taylor, R. S., Edwards, R., Greaves, C. J., and Campbell, J. L. (2011). The impact of social isolation on the health status and health-related quality of life of older people. Quality of Life Research, 20(1), 57–67. Retrieved from: https://doi.org/10.1007/s11136-010-9717-2
- Holt-Lunstad, J., and Steptoe, A. (2022). Social isolation: An underappreciated determinant of physical health. Current Opinion in Psychology, 43, 232–37. Retrieved from: https://doi. org/10.1016/j.copsyc.2021.07.012

- Kobayashi, L.C., and Steptoe, A. (2018). Social isolation, loneliness, and health behaviors at older ages: longitudinal cohort study. Annals of Behavioural Medicine, 52:582–93. Retrieved from: https://doi.org/10.1093/abm/kax033
- Shankar, A., McMunn, A., Banks, J., and Steptoe, A. (2011). Loneliness, social isolation, and behavioural and biological health indicators in older adults. Health Psychology, 30(4), 377–385. Retrieved from: https://doi.org/10.1037/a0022826
- Valtorta, N.K., Kanaan, M., Gilbody, S., Ronzi, S., and Hanratty, B. (2016). Loneliness and social isolation as risk factors for coronary heart disease and stroke: systematic review and metaanalysis of longitudinal observational studies. Heart, 102, 1009–16. Retrieved from: https://doi.org/10.1136/ heartjnl-2015-308790
- 103 Gilmour, H., and Ramage-Morin, P.L. (2020). Social isolation and mortality among Canadian seniors. Health reports, 31(3), 27–38. Retrieved from: https://doi.org/10.25318/82-003-x202000300003-eng.=
- Hawton, A., Green, C., Dickens, A. P., Richards, S. H., Taylor, R. S., Edwards, R., Greaves, C. J., and Campbell, J. L. (2011). The impact of social isolation on the health status and health-related quality of life of older people. Quality of Life Research, 20(1), 57–67. Retrieved from: https://doi.org/10.1007/s11136-010-9717-2

- Holt-Lunstad, J., and Steptoe, A. (2022).
 Social isolation: An underappreciated determinant of physical health.
 Current Opinion in Psychology, 43, 232-237. Retrieved from: https://doi.org/10.1016/j.copsyc.2021.07.012
- ¹⁰⁶ Kobayashi, L.C., and Steptoe, A. (2018). Social isolation, loneliness, and health behaviors at older ages: longitudinal cohort study. Annals of Behavioural Medicine, 52: 582–93. Retrieved from: https://doi.org/10.1093/abm/kax033
- Shankar, A., McMunn, A., Banks, J., and Steptoe, A. (2011). Loneliness, social isolation, and behavioural and biological health indicators in older adults. Health Psychology, 30(4), 377–85. Retrieved from: https://doi.org/10.1037/a0022826
- Valtorta, N.K., Kanaan, M., Gilbody, S., Ronzi, S., and Hanratty, B. (2016). Loneliness and social isolation as risk factors for coronary heart disease and stroke: systematic review and metaanalysis of longitudinal observational studies. Heart, 102, 1009–16. Retrieved from: https://doi.org/10.1136/ heartjnl-2015-308790
- 109 Gilmour, H., and Ramage-Morin, P.L. (2020). Social isolation and mortality among Canadian seniors. Health reports, 31(3), 27–38. Retrieved from: https://doi.org/10.25318/82-003-x202000300003-eng

- Hawton, A., Green, C., Dickens, A. P., Richards, S. H., Taylor, R. S., Edwards, R., Greaves, C. J., and Campbell, J. L. (2011). The impact of social isolation on the health status and health-related quality of life of older people. Quality of Life Research, 20(1), 57–67. Retrieved from: https://doi.org/10.1007/s11136-010-9717-2
- Holt-Lunstad, J., and Steptoe, A. (2022). Social isolation: An underappreciated determinant of physical health. Current Opinion in Psychology, 43, 232–37. Retrieved from: https://doi.org/10.1016/j.copsyc.2021.07.012
- Nobayashi, L.C., and Steptoe, A. (2018). Social isolation, loneliness, and health behaviors at older ages: longitudinal cohort study. Annals of Behavioural Medicine, 52: 582–93. Retrieved from: https://doi.org/10.1093/abm/kax033
- Shankar, A., McMunn, A., Banks, J., and Steptoe, A. (2011). Loneliness, social isolation, and behavioural and biological health indicators in older adults. Health Psychology, 30(4), 377–85. Retrieved from: https://doi.org/10.1037/a0022826
- ¹¹⁴ Valtorta, N.K., Kanaan, M., Gilbody, S., Ronzi, S., and Hanratty, B. (2016). Loneliness and social isolation as risk factors for coronary heart disease and stroke: systematic review and metaanalysis of longitudinal observational studies. Heart, 102, 1009–16. Retrieved from: https://doi.org/10.1136/ heartjnl-2015-308790

- Victor, C., Scambler, S., Bond, J., and Bowling, A. (2000). Being alone in later life: Loneliness, social isolation and living alone. Reviews in Clinical Gerontology, 10, 407–17. Retrieved from: doi:10.1017/S0959259800104101
- Victor, C., Scambler, S., Bond, J., and Bowling, A. (2000). Being alone in later life: Loneliness, social isolation and living alone. Reviews in Clinical Gerontology, 10, 407–17. Retrieved from: doi:10.1017/S095925980010410.
- Smith, K. J., and Victor, C. (2019).
 Typologies of loneliness, living alone and social isolation, and their associations with physical and mental health. Ageing and Society, 39, 1709–30. Retrieved from: doi:10.1017/S0144686X18000132
- ¹¹⁸ Kleinberg, E. (2016). Social isolation, loneliness, and living alone: Identifying the risks for public health. American Journal of Public Health, 106(5), 786-87. Retrieved from: https://doi. org/10.2105/AJPH.2016.303166
- lamtrakul, P., and Chayphong, S. (2022). Exploring the influencing factors on living alone and social isolation among older adults in rural areas of Thailand. International Journal of Environmental Research and Public Health, 19, 14572. Retrieved from: https://doi.org/10.3390/ijerph192114572
- Victor, C., Scambler, S., Bond, J., and Bowling, A. (2000). Being alone in later life: Loneliness, social isolation and living alone. Reviews in Clinical Gerontology, 10, 407–17. Retrieved from: doi:10.1017/S0959259800104101

- ¹²¹ Kleinberg, E. (2016). Social isolation, loneliness, and living alone: Identifying the risks for public health. American Journal of Public Health, 106(5), 786-787. Retrieved from: https://doi. org/10.2105/AJPH.2016.303166
- Smith, K. J., and Victor, C. (2019).
 Typologies of loneliness, living alone and social isolation, and their associations with physical and mental health. Ageing and Society, 39, 1709–30. Retrieved from: doi:10.1017/S0144686X18000132
- Kleinberg, E. (2016). Social isolation, loneliness, and living alone: Identifying the risks for public health. American Journal of Public Health, 106(5), 786-87. Retrieved from: https://doi. org/10.2105/AJPH.2016.303166
- ¹²⁴ Iamtrakul, P., and Chayphong, S. (2022). Exploring the influencing factors on living alone and social isolation among older adults in rural areas of Thailand. International Journal of Environmental Research and Public Health, 19, 14572. Retrieved from: https://doi. org/10.3390/ijerph192114572
- Johnson, S., Bascu, J., McIntosh, T., Jeffery, B., and Novik, N.
 (2021). Competing challenges for immigrant seniors: Social isolation and the pandemic. Healthcare Management Forum, 34(5), 266–71. Retrieved from: https://doi.org/10.1177/08404704211009233

- Johnson, S., Bascu, J., McIntosh,
 T., Jeffery, B., and Novik, N.
 (2021). Competing challenges for immigrant seniors: Social isolation and the pandemic. Healthcare
 Management Forum, 34(5), 266–71. Retrieved from: https://doi.org/10.1177/08404704211009233
- Johnson, S., Bascu, J., McIntosh,
 T., Jeffery, B., and Novik, N.
 (2021). Competing challenges for immigrant seniors: Social isolation and the pandemic. Healthcare
 Management Forum, 34(5), 266–71. Retrieved from: https://doi.org/10.1177/08404704211009233
- Johnson, S., Bacsu, J., McIntosh,
 T., Jeffery, B., and Novik, N. (2019).
 Social isolation and loneliness among immigrant and refugee seniors in
 Canada: a scoping review. International Journal of Migration, Health and Social
 Care, 15(3), 177–90. Retrieved from:
 DOI:10.1108/IJMHSC-10-2018-0067
- Wu, Z., and M. Penning. (2015).
 Immigration and Ioneliness in later life. Ageing and Society, 35(1),
 64–95. Retrieved from: doi:10.1017/ S0144686X13000470
- Johnson, S., Bacsu, J., McIntosh,
 T., Jeffery, B., and Novik, N. (2019).
 Social isolation and loneliness among immigrant and refugee seniors in
 Canada: a scoping review. International Journal of Migration, Health and Social
 Care, 15(3), 177–90. Retrieved from:
 DOI:10.1108/IJMHSC-10-2018-0067

- Wu, Z., and M. Penning. (2015).
 Immigration and loneliness in later
 life. Ageing and Society, 35(1),
 64–95. Retrieved from: doi:10.1017/
 S0144686X13000470
- 132 Government of Canada. (2022, April 20). Social isolation of seniors: A focus on new immigrant and refugee seniors in Canada. Retrieved June 5, 2023, from: httml#h2.5-h3.5.
- 133 Government of Canada. (2022, April 20). Social isolation of seniors: A focus on new immigrant and refugee seniors in Canada. Retrieved June 5, 2023, from: httml#h2.5-h3.5
- Government of Canada. (2021, July 28). Self-reported loneliness among recent immigrants, long-term immigrants, and Canadian-born individuals. Retrieved June 5, 2023, from: https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021007/article/00001-eng.htm
- Johnson, S., Bascu, J., McIntosh,
 T., Jeffery, B., and Novik, N.
 (2021). Competing challenges for immigrant seniors: Social isolation and the pandemic. Healthcare
 Management Forum, 34(5), 266–71. Retrieved from: https://doi.org/10.1177/08404704211009233

- Johnson, S., Bascu, J., McIntosh,
 T., Jeffery, B., and Novik, N.
 (2021). Competing challenges for immigrant seniors: Social isolation and the pandemic. Healthcare
 Management Forum, 34(5), 266–71. Retrieved from: https://doi.org/10.1177/08404704211009233
- Hossen, A. (2012). Social isolation and loneliness among elderly immigrants:
 The case of south Asian elderly living in Canada. Journal of International Social Issues, 1(1), 1–10
- Koehn, S., Ferrer, I., and Brotman,
 S. (2022). Between loneliness and
 belonging: Narratives of social isolation
 among immigrant older adults in
 Canada. Ageing and Society, 42,
 1117–37. Retrieved from: doi:10.1017/
 S0144686X20001348
- Syed, M. A., McDonald, L., Smirle, C., Lau, K., Mirza. R. M., and Hitzig, S. L. (2017). Social isolation in Chinese older adults: Scoping review of age-friendly community planning. Canadian Journal on Aging, 36(2), 223–45. Retrieved from: https://doi.org/10.1017/ S0714980817000101
- ¹⁴⁰ Koehn, S., Ferrer, I., and Brotman, S. (2022). Between loneliness and belonging: Narratives of social isolation among immigrant older adults in Canada. Ageing and Society, 42, 1117–37. Retrieved from: doi:10.1017/ S0144686X20001348

- Syed, M. A., McDonald, L., Smirle, C., Lau, K., Mirza. R. M., and Hitzig, S. L. (2017). Social isolation in Chinese older adults: Scoping review of age-friendly community planning. Canadian Journal on Aging, 36(2), 223–45. Retrieved from: https://doi.org/10.1017/ S0714980817000101
- Hossen, A. (2012). Social isolation and loneliness among elderly immigrants:
 The case of south Asian elderly living in Canada. Journal of International Social Issues, 1(1), 1–10.
- 143 Syed, M. A., McDonald, L., Smirle, C., Lau, K., Mirza. R. M., and Hitzig, S. L. (2017). Social isolation in Chinese older adults: Scoping review of age-friendly community planning. Canadian Journal on Aging, 36(2), 223–45. Retrieved from: https://doi.org/10.1017/ S0714980817000101
- Pew Research Centre. (2014, April 3). Older adults and technology use. Retrieved June 5, 2023, from: https://www.pewresearch.org/internet/2014/04/03/older-adults-and-technology-use/
- National Institute on Ageing (2022). Understanding Social Isolation and Loneliness Among Older Canadians and How to Address It. Toronto, ON: National Institute on Ageing, Toronto Metropolitan University.
- National Institute on Ageing (2022). Understanding Social Isolation and Loneliness Among Older Canadians and How to Address It. Toronto, ON: National Institute on Ageing, Toronto Metropolitan University.

- Nyqvist, F., Victor, C. R., Forsman, A.K., and Cattan, M. (2016). The association between social capital and loneliness in different age groups: A population-based study in Western Finland. BMC Public Health, 16(1), 1–8. Retrieved from: https://doi.org/10.1186/s12889-016-3248-x
- 148 BMJ Open Blog. (2022, October 18). Scant evidence to support roll out of social prescribing policy internationally. Retrieved July 20, 2023, from: https://blogs.bmj.com/ bmjopen/2022/10/18/scant-evidenceto-support-roll-out-of-socialprescribing-policy-internationally/
- Husk, K., Elston, J., Gradinger, F.,
 Callaghan, L., and Asthana, S. (2019).
 Social prescribing: Where is the evidence? British Journal of General Practice, 69(678), 6-7. Retrieved from: https://doi.org/10.3399/bjgp19X700325
- Kiely, B., and Smith, S. (2022, October 24). Social prescribing needs more evidence to support its benefits before widespread rollout new study.
 The Conversation. Retrieved July 20, 2023, from: https://theconversation.com/social-prescribing-needs-more-evidence-to-support-its-benefits-before-widespread-rollout-new-study-192778

- Shields-Zeeman, L., Old, A., Adler, N., Gottlieb, L., and Pantell, M. (2021). Addressing Social Isolation and Loneliness: Lessons from Around the World. The Commonwealth Fund. Retrieved July 20, 2023, from: https://www.commonwealthfund.org/blog/2021/addressing-social-isolation-and-loneliness-lessons-around-world
- Husk, K., Elston, J., Gradinger, F.,
 Callaghan, L., and Asthana, S. (2019).
 Social prescribing: Where is the
 evidence? British Journal of General
 Practice, 69(678), 6-7. Retrieved
 from: https://doi.org/10.3399/
 bjgp19X700325
- 153 Kiely, B., and Smith, S. (2022, October 24). Social prescribing needs more evidence to support its benefits before widespread rollout new study.

 The Conversation. Retrieved July 20, 2023, from: https://theconversation. com/social-prescribing-needs-more-evidence-to-support-its-benefits-before-widespread-rollout-new-study-192778
- O'Rourke, H. M., Collins, L., and Sidani, S. (2018). Interventions to address social connectedness and loneliness for older adults: A scoping review. BMC Geriatrics, 18(1), 1–13. Retrieved from: https://doi.org/10.1186/s12877-018-0897-x
- Gardiner, C., Geldenhuys, G., and Gott, M. (2018). Interventions to reduce social isolation and loneliness among older people: An integrative review. Health and Social Care in the Community, 26, 147–57. Retrieved from: https://doi.org/10.1111/hsc.12367

- Kiely, B., and Smith, S. (2022, October 24). Social prescribing needs more evidence to support its benefits before widespread rollout new study. The Conversation. Retrieved July 20, 2023, from: https://theconversation.com/social-prescribing-needs-more-evidence-to-support-its-benefits-before-widespread-rollout-new-study-192778
- Husk, K., Elston, J., Gradinger, F.,
 Callaghan, L., and Asthana, S. (2019).
 Social prescribing: Where is the evidence? British Journal of General Practice, 69(678), 6-7. Retrieved from: https://doi.org/10.3399/bjgp19X700325
- Husk, K., Elston, J., Gradinger, F.,
 Callaghan, L., and Asthana, S. (2019).
 Social prescribing: Where is the evidence? British Journal of General Practice, 69(678), 6-7. Retrieved from: https://doi.org/10.3399/bjgp19X700325
- National Senior Strategy. Enabling the Creation of Age-Friendly Physical Environments and Spaces. Retrieved July 20, 2023, from: https://nationalseniorsstrategy.ca/the-four-pillars/pillar-1/age-friendly-environments/#_edn21
- National Senior Strategy. Enabling the Creation of Age-Friendly Physical Environments and Spaces. Retrieved July 20, 2023, from: https://nationalseniorsstrategy.ca/the-four-pillars/pillar-1/age-friendly-environments/#_edn21

- National Senior Strategy. Enabling the Creation of Age-Friendly Physical Environments and Spaces. Retrieved July 20, 2023, from: https://nationalseniorsstrategy.ca/the-four-pillars/pillar-1/age-friendly-environments/# edn21
- National Senior Strategy. Enabling the Creation of Age-Friendly Physical Environments and Spaces. Retrieved July 20, 2023, from: https://nationalseniorsstrategy.ca/the-four-pillars/pillar-1/age-friendly-environments/#_edn21
- World Health Organization. Pan-Canadian Age-Friendly Communities Initiative. Retrieved September 30, 2023, from: https://extranet.who. int/agefriendlyworld/network/pancanadian-age-friendly-communitiesinitiative/
- Plouffe, L. and Kalache, A. (2011).
 Making communities age friendly: state and municipal initiatives in Canada and other countries. Gac Saint, 25(s), pp. 131–37.
- Friendly Communities. Retrieved September 25, 2023, from: https://www.canada.ca/en/public-health/services/health-promotion/aging-seniors/friendly-communities. html#sec5
- 166 Government of Canada. (2023). Age-Friendly Communities. Retrieved September 25, 2023, from: https://www.canada.ca/en/public-health/services/health-promotion/aging-seniors/friendly-communities. html#sec5

- Levasseur, M., Dubois, M. F., Généreux, M., Menec, V., Raina, P., Roy, M., ... and St-Pierre, C. (2017). Capturing how age-friendly communities foster positive health, social participation and health equity: a study protocol of key components and processes that promote population health in aging Canadians. BMC Public Health, 17(1).
- World Health Organization. About the Global Network for Age-friendly Cities and Communities. Retrieved September 25, 2023 from: https://extranet.who.int/agefriendlyworld/who-network/#:~:text=cities%20 and%20communities.-,The%20 WHO%20Global%20Network%20 for%20Age%2Dfriendly%20Cities%20 and%20Communities,over%20 300%20million%20people%20 worldwide
- Alliance for Healthier Communities.
 (2022, May 17). Social Prescribing.
 Retrieved July 20, 2023, from:
 https://www.allianceon.org/Social-Prescribing#whatis
- The King's Fund. (2020, November).
 What is social prescribing.
 Retrieved July 20, 2023, from:
 https://www.kingsfund.org.uk/
 publications/social-prescribing?gcli
 d=Cj0KCQjwk96lBhDHARIsAEKO4xb
 yQHAa2_wQEVbf6tKQesaNy9FjYC-_
 W5c5RvOamWHKXWhs7DGTW_UaAtg-EALw_wcB
- Alliance for Healthier Communities.
 (2022, May 17). Social Prescribing.
 Retrieved July 20, 2023, from:
 https://www.allianceon.org/Social-Prescribing#whatis

- The King's Fund. (2020, November).
 What is social prescribing.
 Retrieved July 20, 2023, from:
 https://www.kingsfund.org.uk/
 publications/social-prescribing?gcli
 d=Cj0KCQjwk96lBhDHARIsAEKO4xb
 yQHAa2_wQEVbf6tKQesaNy9FjYC-_
 W5c5RvOamWHKXWhs7DGTW_UaAtgEALw_wcB
- Alliance for Healthier Communities.
 (2022, May 17). Social Prescribing.
 Retrieved July 20, 2023, from:
 https://www.allianceon.org/Social-Prescribing#whatis
- Foster, A., Thompson, J., Holding,
 E., Ariss, S., Mukuria, C., Jacques,
 R., Akparido, R., and Haywood, A.
 (2021). Impact of social prescribing to address loneliness: A mixed methods evaluation of a national social prescribing programme. Health and Social Care in the Community, 29(5), 1439–49. Retrieved from: https://doi.org/10.1111/hsc.13200
- Kilgariff-Foster, A., and O'Cathain, A. (2015). Exploring the components and impact of social prescribing.
 Journal of Public Mental Health, 14(3).
 127–34. Retrieved from: https://doi. org/10.1108/JMPH-06-2014-0027
- Kimberlee, R. (2015). What is social prescribing? Advances in Social Sciences Research Journal, 2(1), 102–110.

- Liebmann, M., Pitman, A., Hsueh, Y., Bertotti, M., and Pearce, E. (2022). Do people perceive benefits in the use of social prescribing to address loneliness and/or social isolation? A qualitative meta-synthesis of the literature. BMC Health Services Research, 22(1264), 1–29. Retrieved from: https://doi.org/10.1186/s12913-022-08656-1
- Foster, A., Thompson, J., Holding,
 E., Ariss, S., Mukuria, C., Jacques,
 R., Akparido, R., and Haywood, A.
 (2021). Impact of social prescribing to address loneliness: A mixed methods evaluation of a national social prescribing programme. Health and Social Care in the Community, 29(5), 1439–49. Retrieved from: https://doi.org/10.1111/hsc.13200
- Kilgariff-Foster, A., and O'Cathain, A. (2015). Exploring the components and impact of social prescribing.
 Journal of Public Mental Health, 14(3).
 127–34. Retrieved from: https://doi.org/10.1108/JMPH-06-2014-0027
- 180 Kimberlee, R. (2015). What is social prescribing? Advances in Social Sciences Research Journal, 2(1), 102–10.
- Liebmann, M., Pitman, A., Hsueh, Y., Bertotti, M., and Pearce, E. (2022). Do people perceive benefits in the use of social prescribing to address loneliness and/or social isolation? A qualitative meta-synthesis of the literature. BMC Health Services Research, 22(1264), 1–29. Retrieved from: https://doi. org/10.1186/s12913-022-08656-1

- ¹⁸² Community Services BC. (n.d). Seniors Social Prescribing Program. Retrieved July 20, 2023, from: https://www.comservice.bc.ca/program/seniors-social-prescribing-program/
- Alliance for Healthier Communities.
 (2020). Rx: Community Social
 Prescribing in Ontario, Final Report.
- Balki, E., Hayes, N., and Holland, C. (2022). Effectiveness of technology interventions in addressing social isolation, connectedness, and loneliness in older adults: Systematic umbrella review. JMIR Aging, 5(4), e40125. Retrieved from: https://doi.org/10.2196/40125
- Khosravi, P., Rezvani, A., and Wieworra,
 A. (2016). The impact of technology on older adults' social isolation.
 Computers in Human Behaviour, 63, 594–603. Retrieved from: https://doi.org/10.1016/j.chb.2016.05.092.
- Clayton, D., and Astell, A. (2022).
 Social isolation and the role of
 AgeTech in a post-COVID world.
 Healthcare Management Forum, 35(5),
 291–95. Retrieved from: https://doi.org/10.1177/08404704221112023
- Clayton, D., and Astell, A. (2022).
 Social isolation and the role of
 AgeTech in a post-COVID world.
 Healthcare Management Forum, 35(5),
 291–95. Retrieved from: https://doi.
 org/10.1177/08404704221112023

- Clayton, D., and Astell, A. (2022).
 Social isolation and the role of
 AgeTech in a post-COVID world.
 Healthcare Management Forum, 35(5),
 291–95. Retrieved from: https://doi.
 org/10.1177/08404704221112023
- TELUS Health. (2023). TELUS Health Social Connect. Retrieved July 20, 2023, from: https://www.telus.com/en/health/organizations/health-authorities-and-hospitals/patient-and-consumer-engagement-solutions/socialconnect
- 190 TELUS Health. (2023). TELUS Health Social Connect. Retrieved July 20, 2023, from: https://www.telus.com/en/health-organizations/health-authorities-and-hospitals/patient-and-consumer-engagement-solutions/socialconnect
- ¹⁹¹ Balki, E., Hayes, N., and Holland, C. (2022). Effectiveness of technology interventions in addressing social isolation, connectedness, and loneliness in older adults: Systematic umbrella review. JMIR aging, 5(4).
- 192 Sen, K., Prybutok, G., and Prybutok, V. (2022). The use of digital technology for social wellbeing reduces social isolation in older adults: A systematic review. SSM-population health, 17.
- Balki, E., Hayes, N., and Holland, C. (2022). Effectiveness of technology interventions in addressing social isolation, connectedness, and loneliness in older adults: Systematic umbrella review. JMIR aging, 5(4).

- Amélie Gauthier-Beaupré. Technology-Based Supports for Ageing in Place:
 Are they Effective? Visions for Change Policy Challenge 2019–2020. Retrieved September 25, 2023, from: https://agewell-nih-appta.ca/wp-content/uploads/2020/03/FINAL-AGauthier-Beaupre.pdf
- ¹⁹⁵ National Institute on Ageing. (2022). Understanding Social Isolation and Loneliness Among Older Canadians and How to Address It. Toronto, ON: National Institute on Ageing, Toronto Metropolitan University.

To learn more about the NIA visit our website at **www.NIAgeing.ca** and follow us on Twitter **@NIAgeing**

