Social Isolation and Loneliness Among Seniors in Vancouver: Strategies for Reduction and Prevention

A Report to the City of Vancouver and Vancouver Coastal Health

Eddy M. Elmer, MA
City of Vancouver Seniors' Advisory Committee
PhD Candidate, Social Gerontology, Vrije Universiteit

May 29, 2018

City of Vancouver
Seniors' Advisory Committee

This report has been shared with Vancouver City Council. City staff is currently reviewing the report to advise Council on potential next steps. From time to time, an addendum may be added to this report to reflect new research and best practices, and to correct errors. Expired web links may also be updated when possible. Readers are encouraged to visit the website below for updates and are also welcome to provide comments and suggestions. The opinions and recommendations in this report, and any errors or omissions, are those of the author and do not necessarily reflect the views of the funders or publishers. Please note that the recommendations should be read in the context of the literature review, rather than separately.

www.seniorsloneliness.ca

Recommended citation:
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*. Vancouver, BC: City of Vancouver Seniors' Advisory Committee. Retrieved from: http://www.seniorsloneliness.ca

Table of Contents

Acknowledgments

This report is based on findings from the Social Isolation and Loneliness Among Seniors Project (SILAS), an initiative of the City of Vancouver Seniors' Advisory Committee. The Committee is grateful to the City of Vancouver for funding this project, and to Carol Ann Young, Senior Social Planner, and Mary Clare Zak, Director of Social Policy & Projects, for their support. The Committee is also grateful to Vancouver Coastal Health for funding and especially to Steven Dang, Manager of Population Health. Councillors Elizabeth Ball and Tim Stevenson are thanked for their ongoing encouragement. The Committee also thanks former member Dr. Brian Tucker for his initial leadership on this project and the Social Policy & Research Council of British Columbia (SPARC BC) for organizing the community consultations.

The author would like to acknowledge the valuable insights provided by participants in the community consultations and the guidance provided by members of the SILAS collaborative, members of which are listed in Appendix G. The author also wishes to thank the following people for their constructive feedback on earlier versions of this report: Shannon Lee and Keltie Craig (City of Vancouver, Social Policy & Projects Division); Dr. Sarah Canham and Dr. Atiya Mahmood (Department of Gerontology, Simon Fraser University); Dr. Tineke Fokkema (Netherlands Interdisciplinary Demographic Institute); Dr. Theo van Tilburg (VU University Amsterdam); Heather Campbell (PhD Student, Faculty of Law, Queen's University); and Tawnya Boudier (Occupational Therapist, Northern Health Authority).

About the Author

Eddy Elmer, MA, is a member of the City of Vancouver Seniors' Advisory Committee and a PhD student in social gerontology at Vrije Universiteit Amsterdam. He is currently working on his dissertation, which focuses on factors linking minority stress and loneliness among older LGBTQ+ adults. You can reach him online at www.eddyelmer.com or via Twitter @Eddy_Elmer.

Executive Summary

This report presents the findings of the Social Isolation and Loneliness Among Seniors (SILAS) Project—an initiative of the City of Vancouver Seniors' Advisory Committee. The purpose of the project was to develop a plan to help reduce (and ideally prevent) social isolation and loneliness among seniors in Vancouver. A secondary purpose was to fulfill a key requirement of the City of Vancouver's application to the World Health Organization for designation as a Global Age-Friendly City. Among the requirements for achieving this designation, Vancouver must implement policies to help ensure that seniors feel socially connected and integrated into their communities.

This year-long project, which was jointly funded by the City of Vancouver and the Vancouver Coastal Health Authority, comprised three parts: an extensive literature review of the causes and consequences of isolation and loneliness, along with possible strategies for prevention and reduction; four community consultations with over 200 local service providers; and a set of recommendations that the City of Vancouver, local service providers, and other interested parties can consider when trying to tackle isolation and loneliness at the local level.

The literature review highlighted key distinctions between isolation—having a small or non-existent social network—and loneliness—the painful, often stigmatized emotional response resulting from a mismatch between one's actual and desired relationships in terms of quantity, frequency of contact, and, especially, quality. Given its high degree of subjectivity, loneliness—also known as perceived social isolation—is only modestly associated with objective isolation.

The review also uncovered a large volume of literature linking isolation and loneliness—particularly in their chronic forms—to a high risk for various physical and psychological health problems, as well as early mortality. These relationships are evident even after accounting for pre-existing health problems and other confounds, suggesting that they play a causal role in poor health and early mortality.

Contrary to common belief, isolation and loneliness are not only "seniors' issues;" they can occur at any point in the life course, given various combinations of biological, psychological, and social risk factors, and can negatively impact health and well-being even at earlier ages. However, some risk factors are more common in later life (e.g., widowhood, physical disability). Moreover, the health effects of isolation and loneliness can hasten the aging process and are also associated with increased healthcare utilization and healthcare spending by seniors. Isolation and loneliness also have a tendency to spread within social networks. This is why researchers, service providers, and now governments, too, have taken a keen interest in these issues.

Although it is often believed that isolation and loneliness are on the rise in modern society, the review uncovered mixed evidence for this claim. Whether or not the proportion of isolated and lonely seniors is increasing, it is clear that the *absolute number* will likely increase due to population aging. This is of particular concern in Vancouver, as there will be a 79% increase in population of local residents aged 65-74 and a 105% increase in those aged 75+ over the next 25 years.

Most instances of isolation and loneliness are transient and a normal part of the human condition. Loneliness in particular seems to have evolved like hunger, thirst, and other biological signals that tell us when our basic needs are not being met. For some people, however, various risk factors—both internal and external—can come together to create a self-reinforcing cycle of loneliness characterized by distorted social perceptions and counterproductive behaviours, including social withdrawal. The best available evidence on interventions suggests that the most common strategy—providing social contact—might help prevent transient loneliness from becoming chronic in certain at-risk groups, but this strategy is less effective when loneliness has become entrenched. In these cases, cognitive distortions and self-defeating behaviours should be addressed before the issues that triggered the loneliness in the first place.

Given the various emotional, social, and financial costs associated with chronic isolation and loneliness, along with the difficulty inherent in remediating these problems, it is important that everyone take steps to reduce and, ideally, *prevent* them—as early in life as possible. To this end, the results of the literature review were combined with the insights from the 200 participants in the community consultations to develop 23 recommendations addressing six general areas: identification of isolated and lonely people; outreach; improvement of service provision; reduction of barriers to social participation; improved basic and applied research; and public education.

The report cautions that there is no easy solution—no perfect social program, no perfect group activity that will reduce or prevent chronic isolation and loneliness. These are complex issues that present in different ways and have different causes, thus requiring a multidimensional approach tailored to each individual. They also require a good deal of trial and error, as well as patience and realistic expectations for success.

The 23 recommendations are not meant to be prescriptive; rather, they are intended to be “jumping-off” points for further discussion and brainstorming. Interested parties are invited to adopt the recommendations as they are, or adapt them based on their specific needs and available resources. Whatever they do, it is hoped that they will approach the recommendations with an open mind. Moreover, it is hoped that they will evaluate and document their efforts—successful or not—and share them with colleagues and the Seniors’ Advisory Committee. The more we can learn about isolation and loneliness, the better equipped we will be to tackle these problems effectively.

Please note: It is advisable to read the recommendations in the context of the literature review, rather than separately.

Glossary of Terms

The following terms have multiple interpretations, but for the purposes of this report, they are defined as follows:

Adaptive/adaptation. Any trait, emotion, perception, behaviour, or other response that helps one to successfully adjust to one's environment and cope with the demands of everyday life (or, from the evolutionary perspective, anything that promoted survival and reproduction for our ancestors).

Collective loneliness. Perceived absence of a meaningful connection with a group or social identity beyond the level of individuals (e.g., a school, workplace, sports team, voluntary organization, religion, political party, or country).

Correlation. Statistical relationship between two variables (the extent to which two variables fluctuate together). The most common is Pearson's *r* correlation coefficient, which measures the linear relationship between two variables. It ranges from -1 (perfect negative relationship) to 0 (no relationship) to +1 (perfect positive relationship). Curvilinear relationships are measured using other statistics, such as Spearman's *rho* or Kendall's *tau*.

Cross-sectional study. An observational study examining the **correlation** between variables among participants at *one point in time*. Does not permit conclusions about direction of causation, unlike a **longitudinal study**.

Dispositional. Pertaining to a quality, trait, or characteristic that is inherent to the individual (e.g., a dispositional tendency towards negative emotions).

Emotional/intimate loneliness. Perceived lack of a satisfying, meaningful relationship with a significant other—a close, reliable attachment figure like a spouse or best friend who not only provides emotional support but who also affirms one's value as a person.

Evolutionary. Pertaining to, or resulting from, our evolution as a human species over millions of years.

Existential loneliness. One's fundamental, inescapable sense of aloneness in the universe. The loneliness felt when realizing that nobody else in the world truly understands one's feelings, needs, or desires.

Expectancy effect. When a person in a study expects a given result and therefore unconsciously alters behaviour to match the expectation. May be mistakenly interpreted as evidence for the effectiveness of an intervention.

Experimental study. Scientific method that manipulates a variable or intervention to determine its causal influence on an outcome (e.g., feelings of loneliness). The gold standard version is the **randomized controlled trial**.

External locus of control. Belief that success or failure at something (e.g., meeting people) is due to chance or other factors beyond one's control. Opposite is **internal locus of control**.

False attribution. A person's mistaken belief that the motives underlying another's behaviour are due to internal characteristics of that person rather than external factors.

Hawthorne effect. Change in behaviour among study participants due to their awareness of being observed. May be mistakenly interpreted as evidence for the effectiveness of an intervention.

Heritability. Proportion of variability in a given trait (e.g., isolation or loneliness) that can be attributed to inherited genetic factors.

Instrument. Any standardized, scientifically-validated questionnaire that attempts to measure a particular variable, such as isolation or loneliness (e.g., UCLA Loneliness Scale). Another term for **scale**.

Internal locus of control. Belief that success or failure at something (e.g., meeting people or maintaining harmonious relationships) is due to controllable factors like effort, practice, or attitude. Opposite is **external locus of control**.

Introversion/extraversion. A broad dimension of personality reflecting an overall preference and concern for one's own inner world of thoughts and feelings (introversion) vs. the outside world and other people (extraversion).

Learned helplessness. A feeling of powerlessness and apathy resulting from repeated exposure to insoluble problems or inescapable stress (e.g., no longer trying to make new friends because previous efforts have persistently failed).

Loneliness. A painful emotion caused by dissatisfaction with the quantity and especially *quality* of one's relationships. Also called **perceived social isolation**, in contrast to **objective social isolation**. Different types of loneliness include **emotional/intimate loneliness**, **social/relational loneliness**, and **existential loneliness**.

Longitudinal study. An observational study involving repeated collection of data from the sample individuals over a period of time. Unlike a **cross-sectional** study, this type of study can help elucidate causation between variables by examining their temporal sequence.

Maladaptive social cognition. Negative and erroneous perceptions and beliefs about other people.

Neuroticism. An enduring, dispositional tendency to experience negative emotions (e.g., sadness, anxiety, fear) more readily, frequently, and/or intensely than average.

Objective social isolation. Another term for **social isolation**.

Perceived social isolation. Another term for **loneliness**.

Psychoeducation. A type of intervention in which participants receive education and information about a particular condition or state (e.g., loneliness) in an effort to help them better understand and cope with it.

Quantitative research. Any type of scientific research that involves collecting numerical data from participants (e.g., from instruments/scales, surveys, or observations in experiments).

Qualitative research. Any type of scientific research that involves collecting non-numerical data from participants, such as verbal reports and interviews.

Quasi-experiment. Type of **experimental study** that lacks random assignment of participants. This is considered to be less rigorous than a **randomized controlled trial** because the different groups may not be comparable at baseline.

Randomized controlled trial (RCT). Type of **experimental study** in which participants are randomly assigned to two or more groups, with each group exposed to a specific intervention, except for the *control group*, which is not. Groups are then followed to see if the intervention or treatment affects the outcome. This is the preferred method for evaluating the effectiveness of interventions because it helps minimize the possibility that factors *other than the intervention* (e.g., **self-selection bias**) are responsible for differences between the treatment and control groups.

Regression to the mean. When a variable is extreme on its first measure, it tends to be closer to the average level on subsequent measurements. In non-randomized studies, this statistical reduction may be mistakenly interpreted as evidence for the effectiveness of an intervention.

Reliable/reliability. Pertaining to the ability of an **instrument/scale** to accurately and consistently measure a particular variable over time, across different raters, or under different conditions. A measure that is not reliable is also not **valid**.

Scale. Another term for **instrument**.

Self-efficacy. Belief and confidence in one's ability to succeed in specific situations or tasks (e.g., relationship self-efficacy).

Self-selection bias. Any situation in which individuals select themselves into an intervention (e.g., when certain respondents choose to participate in a program). This bias can make it difficult to determine whether differences between an intervention and non-intervention group are due to the actual intervention as opposed to characteristics of the individuals who chose to participate in the group.

Social cognition. How we perceive and think about other people (e.g., trying to read other people's emotion; interpreting their words and actions; determining their intentions).

Social connectedness. General term referring to embeddedness within social networks and/or feeling socially connected to others. Considered the opposite of **social isolation** and **loneliness**.

Social isolation. Having a small or non-existent social network in terms of quantity and/or frequency of contact. Unlike loneliness, it is measured objectively.

Social/relational loneliness. Perceived lack of quality relationships with a broader network of friends and family—people whom we see regularly and who provide emotional and instrumental support, although perhaps not as much as a spouse or best friend.

Social support. Practical or emotional assistance given to another person (e.g., providing money, assistance with activities of daily living, or empathy during a crisis).

Socioemotional selectivity. As time horizons shrink with increasing age, people become increasingly selective, investing greater energy and resources in meaningful and emotionally gratifying relationships, goals, and experiences.

Solitude. The pleasant state of being alone without being lonely; spending time alone by choice. *Unwanted* solitude is **loneliness**.

Valid/validity. Degree to which an **instrument/scale** measures the variable that it purports to measure (e.g., a loneliness scale is valid if it measures loneliness and not a different variable). Importantly, if a measure is not **reliable**, it is also not valid (it is, however, possible for a measure to be valid but not reliable).

Variance. Variation of scores on a particular variable (e.g., scores on a loneliness scale).

Introduction: Policy Context

In August 2013, Vancouver City Council passed a motion[1] committing the City to work towards achieving "Global Age-Friendly City" status from the World Health Organization. Among the requirements for achieving this designation[2], Vancouver must implement policies to help seniors feel socially connected and integrated into their communities.

To this end, the City of Vancouver Seniors' Advisory Committee created the Social Isolation and Loneliness Project (SILAS). This project, jointly funded by the City of Vancouver and Vancouver Coastal Health, had three over-arching goals:

1. Reduce and prevent (chronic) social isolation and loneliness among seniors.
2. Develop a process to increase the capacity (i.e., knowledge, strategies, and solutions) of the City, not-for-profit organizations, individuals supporting seniors, and seniors themselves to reduce and prevent isolation and loneliness.
3. Inform the City of Vancouver Social Infrastructure Plan and refresh the City of Vancouver Age-Friendly Action Plan (2013-15).[3] The Action Plan is part of the larger Healthy City Strategy[4], which sets out two key, measurable targets directly relevant to isolation and loneliness: (i) increase Vancouver residents' sense of belonging by 10%; and (ii) ensure that all residents have at least four trusted people in their social network they can rely on for support in a time of need. In addition to helping alleviate social isolation and loneliness, the second target is also aimed at advancing Vancouver's goal to become a resilient city[5] in the aftermath of emergencies and disasters (e.g., earthquakes).

The SILAS project comprised three separate components:

1. A literature review covering the nature, causes, and consequences of isolation and loneliness, as well as evidence for interventions and preventative strategies.
2. Four community consultations with over 200 local service providers, government representatives, academics, and other stakeholders to explore isolation and loneliness in Vancouver.

[1] http://council.vancouver.ca/20131008/documents/motionb1.pdf
[2] http://www.who.int/ageing/age_friendly_cities_guide/en/
[3] http://vancouver.ca/people-programs/social-infrastructure-plan.aspx
[4] http://vancouver.ca/people-programs/healthy-city-strategy.aspx
[5] http://www.100resilientcities.org/

3. A series of recommendations for preventing and reducing isolation and loneliness among seniors in Vancouver, as informed by the research literature and the community consultations.

To guide the SILAS project, a collaborative was formed comprising members of the Seniors' Advisory Committee, staff from the City's Social Policy & Projects division, and representatives from various senior-serving organizations. Members of the collaborative brought their respective expertise and knowledge to meetings in order to guide the three components of the project. Appendix G lists the names and affiliations of the members of the collaborative.

The current report describes the results of this year-long project. The first part contains the literature review. Readers seeking additional information about possible interventions can consult a report by the Social Policy and Research Council of BC (SPARC BC) which was produced at an earlier stage of this project.[6] The second part of this report lists the 23 recommendations that emerged from the project. Key points for each recommendation are described in the body of the report, with supplementary information contained in Appendices A through E. Readers are strongly encouraged to consider the recommendations in the context of the literature review.

Please note that the opinions and recommendations in this report, and any errors or omissions, are those of the author, and do not necessarily reflect the views of the funders or publishers of this report.

[6] SPARC BC, 2017

Research Review

Social Isolation and Loneliness as Public Health Issues

Human beings are a fundamentally social species with a basic *need to belong* and a strong drive for intimacy and companionship. This drive evolved over millions of years to promote mutual protection and co-operation, thus conferring a distinct survival advantage to our ancestors.[7] The drive is evident as people readily form relationships, fear social rejection, resist relationship dissolution, and experience distress when relationships end or are threatened.[8] Moreover, people suffer intensely and may even face premature mortality when they are chronically isolated or lonely, as evident most vividly in extreme cases of feral children, institutionalized orphans, prisoners in solitary confinement, and even non-human primates reared in isolation.[9]

Humans are a fundamentally social species with a basic need to belong and a strong drive for intimacy and companionship.

The negative effects of isolation and loneliness are not, however, restricted to extreme cases. A large volume of cross-sectional, longitudinal, and experimental research suggests that isolation and loneliness, especially when intense or persistent, are risk factors for hypertension, inflammation, heart disease, stroke, diabetes, immune dysregulation, fragmented sleep, anxiety, depression, impaired self-control, poor health behaviours (e.g., physical inactivity, substance abuse), obesity, aggression, suicidality, and cognitive decline.[10] Lack of social connection is also associated with delayed recovery from, and recurrence of, heart disease and breast cancer.[11]

Of note, many of these studies demonstrate that loneliness (i.e., perceived social isolation) has an effect on health over and above objective isolation and health behaviours, suggesting that *perceptions* of relationships are just as important, perhaps

[7] Cacioppo & Patrick, 2008
[8] Baumeister & Leary, 1995
[9] Blum, 1994, 2002; Gawande, 2009; Nelson, Fox, & Zeanah, 2014; Newton, 2002
[10] Barnes et al., 2004; Beutel et al., 2017; Böger & Huxhold, 2018a; Brinkhues et al., 2017; Cacioppo et al., 2002a, 2002b, 2014, 2015; Cacioppo & Cacioppo, 2014; Cacioppo & Hawkley, 2009; Cacioppo, Hawkley, & Thisted, 2010; Cole et al., 2015; Fratiglioni et al., Paillard-Borg, & Winblad, 2004; Gustafsson et al., 1996; Hawkley, Preacher, & Cacioppo, 2010; Hawkley, Thisted, & Cacioppo, 2009; Heffner et al., 2011; Holwerda et al., 2014; Kobayashi & Steptoe, 2018; Kuiper et al., 2015; Lauder et al., 2016; LeReoy et al., 2017; Luanaigh & Lawlor, 2008; Ong, Uchino, & Wethington, 2016; Pietrzak et al., 2017; Stickley & Koyanagi, 2016; Valtorta et al., 2016c; Wilson et al., 2007; Zandstra et al., 2004; Zhong et al., 2016, 2017
[11] Berkman, 1995; Bower et al., 2018; Kroenke et al., 2017

even more so, than objective features of relationships. Moreover, many of these negative effects are evident not just among older adults, but also middle-aged adults, adolescents, and children.[12] They also tend to have persistent and cumulative effects over time; for example, longitudinal studies show a link between isolation in childhood and increased inflammation in later years, even after controlling for socioeconomic status and other childhood risk factors for poor health.[13]

In addition to increasing the risk for specific medical and psychological conditions, isolation and loneliness also appear to be strong risk factors for functional disability[14] and early mortality.[15] In a meta-analysis of studies involving 3.4 million respondents, Holt-Lunstad and colleagues found that isolation and loneliness are both associated with a 30% increased likelihood of early mortality, on par with established risk factors such as physical inactivity and alcohol consumption, and exceeding risk factors such as obesity and air pollution.[16]

Isolation and loneliness affect mental and physical health at all ages, not just later life.

Of note, these effects are apparent even after accounting for possible alternative explanations like age and pre-existing health conditions, thus helping rule out the possibility of reverse causation.[17] In other words, isolation and loneliness appear to play a *causal* role in disability and early mortality. Additionally, these effects are consistent across countries and gender, although a more recent meta-analysis found that the effect of loneliness on mortality is slightly higher for men compared to women.[18]

The meta-analysis by Holt-Lunstad and colleagues provides evidence that many types of social disconnection are harmful, given that the risk of early mortality was of similar magnitude regardless of the measure used (loneliness, living alone, or isolation more broadly). A shortcoming of this analysis, however, is that it included only two studies[19] that assessed isolation and loneliness *simultaneously* (i.e., assessing the effect of one

[12] Hawkley & Capitanio, 2015; Matthews et al., 2017; Yang et al., 2016. In terms of relative impact, studies suggest that isolation has a more negative impact on health in early and later life vs. midlife (Stickley & Koyanagi, 2018; Yang et al., 2016). For young adults, a constricted social network may be especially stressful because they are at a life stage when they are establishing their identities, building careers, and looking for mates, which typically require meeting and spending time with many people (Lasgaard et al., 2016; Luhmann & Hawkley, 2016; Nicolaisen & Thorsen, 2017; Stickley & Koyanagi, 2018). In contrast to isolation, loneliness appears to have a greater impact on health among middle-aged and older adults vs. young adults (Cacioppo & Hawkley, 2003; Hawkley & Cacioppo, 2007).
[13] Caspi et al., 2006; Danese et al., 2009; Lacey, Kumari, & Bartley, 2014; Yang et al., 2016
[14] Gale, Westbury, & Cooper, 2017; Luo, Hawkley, Waite, & Cacioppo, 2012; Perissinotto et al., 2012
[15] Holt-Lunstad et al., 2010, 2015; House et al., 1988; Luo et al., 2012; Shor & Roelfs, 2015
[16] Holt-Lunstad et al., 2015, 2017
[17] Holt-Lunstad et al., 2015
[18] Rico-Uribe et al., 2018
[19] Holwerda et al., 2012; Steptoe et al., 2013

while controlling for the effect of the other), making it difficult to determine if isolation and loneliness have their own, separate, and perhaps even synergistic, effects on mortality. These two studies yielded mixed results. Two other recent studies found that the influence of loneliness on mortality disappears when accounting for isolation.[20] One of these studies also detected a dose-dependent relationship: the higher the level of isolation, the greater the risk of early mortality. Moreover, even those who are mildly isolated appear to be at increased risk.[21] Unlike studies examining health outcomes, which find that isolation and loneliness may have separate, independent effects on health, possibly via different pathways[22], more research is needed to understand whether isolation and loneliness also have separate, independent effects on *mortality*.

More research is also needed to determine if the impact of isolation and loneliness on early mortality is specific to older adults. Most studies in the Holt-Lunstad meta-analysis involved older participants, but the more recent studies cited above suggest that isolation and loneliness increase the risk for early mortality among many age groups. One of those studies included people aged 16-93 (mean age=45) and still found a link between isolation, loneliness, and early mortality.[23] The other study explicitly compared effects on mortality across different age groups (37-52 years, 53-60 years, and 61-73 years) and found that the relationship between isolation/loneliness and early mortality is similar across all of these groups.[24] However, as will be discussed later, several risk factors for isolation and loneliness increase in later life (e.g., health and mobility problems), making this a public health issue of particular relevance to older adults.

Mechanisms underlying the associations between isolation/loneliness and mortality are unclear, but likely involve complex cognitive, behavioral, social, and physiological pathways. For example, relationships may affect health habits via social influence or changes to emotional self-regulation; provide emotional and practical support to reduce or buffer the impact of stress; facilitate healthcare access; or directly impact immune, endocrine, sleep, and other homeostatic functions (e.g., by increasing the expression of negative personality traits or creating a chronic state of fearful hyper-arousal).[25]

---

[20] Elovainio et al., 2017; Tanskanen & Anttila, 2016
[21] Tanskanen & Anttila, 2016
[22] Coyle & Dugan, 2012
[23] Tanskanen & Anttila, 2016
[24] Elovainio et al., 2017
[25] Böger & Huxhold, 2018a; Cacioppo et al., 2002a, 2002b; Cacioppo, Capitanio, & Cacioppo, 2014; Hawkley et al., 2009; Hawkley & Cacioppo, 2010; Holt-Lunstad, 2018b; Mund & Neyer, 2016; Uchino, 2006; Umberson, Crosnoe, & Reczek, 2010; Yang et al., 2016. Loneliness seems to be especially harmful to sleep (Cacioppo et al., 2002a; Hawkley, Preacher, & Cacioppo, 2010). This may be due to the feelings of vulnerability and threat that characterize loneliness, leading some to argue that lonely people sleep with “one eye open” (Matthews et al., 2017). Conversely, poor sleep can also lead to social withdrawal and loneliness (Simon & Walker, 2018).

As mentioned, isolation and loneliness are also associated with other risk factors for poor health and early mortality, such as low education and poverty, so these factors, too, may play a role in the link between isolation/loneliness and early mortality.[26]

Although further research is needed to disentangle these complex pathways[27], the evidence described above has persuaded academics and policy-makers to regard social isolation and loneliness as two pressing public health issues for people of all ages, including older adults.[28] These topics have also received increasing attention in the popular press.[29]

Before delving further into the causes of isolation and loneliness and potential solutions, it is important to take some time to understand how these concepts differ.

Social Isolation vs. Loneliness: An Important Distinction

Social Isolation

Social isolation refers to having a small or non-existent network of kin and non-kin relationships, or minimal contact within the network.[30] It can be measured objectively by observing quantitative social characteristics such as relationship status, living arrangement, number or friends, and density of relationships (i.e., the degree to which people in the network know each other). In addition to these objective *structural* elements of relationships, *functional* elements can also be examined, such as the frequency of specific types of interactions and the availability and amount of social support. Various instruments have been developed to measure these objective characteristics, including the Berkman-Syme Social Network Index[31], the Lubben Social Network Scale[32], the Cohen Social Network Index[33], and a new scale developed by Flowers and colleagues.[34] A thorough list of various instruments has been published by Valtorta and colleagues.[35]

---

[26] Elovainio et al., 2017
[27] Liu & Floud, 2007
[28] Campaign to End Loneliness, 2011; Holt-Lunstad, 2018a; Holt-Lunstad et al., 2017; National Seniors Council of Canada, 2014; United Kingdom Government, 2018
[29] Baker, 2017; Gupta, 2014; Hobbes, 2017; Laing, 2016; Latson, 2018; Masterson, 2017; Renzetti, 2013; Shulevitz, 2013; White, 2010
[30] de Jong Gierveld & Havens, 2004
[31] Berkman & Syme, 1979
[32] Lubben et al., 2006
[33] Cohen et al. 1997
[34] Flowers et al., 2017. Note that some scales measure primary relationships like close friends and family (e.g., the Lubben Social Network Scale) whereas others also measure more distant, secondary relationships like membership in community groups (e.g. the Cohen Social Network Index).
[35] Valtorta, Kanaan, Gilbody, & Hanratty, 2016a

Loneliness

Social isolation is a situation, whereas loneliness is a feeling.

Unlike social isolation, loneliness is *subjective*: it is the painful emotion resulting from a judgment (conscious or not) that one's relationships are lacking in some important way and failing to meet one's needs and expectations. Specifically, it is a mismatch between one's actual and desired relationships[36] in terms of quantity, frequency of contact, and, especially, *perceived quality*. [37] For this reason, it is also called *perceived social isolation*.[38] While loneliness is often fleeting (e.g., due to lack of social visits on a particular day), the more enduring types are of greater interest and possible concern.

Unlike objective social isolation, loneliness is measured subjectively by asking about one's relationship perceptions (e.g. satisfaction with number of confidants and how much one feels sufficiently recognized, connected, accepted, understood, supported, and valued by others).[39] Put simply, a person is lonely if he or she *feels* lonely. Various qualitative accounts have described the intense emotional pain that accompanies loneliness[40], especially chronic loneliness, using language such as *empty, abandoned, trapped, strangling, suffocating, penetrating hurt, despair*, and a *dark void*."[41] In severe cases, some isolated or lonely people use language connoting hopelessness and even death: *nothing to live for*, a *morgue*, a *grave*, and *waiting for death to come*.[42]

Stigma of Loneliness

Besides being painful, loneliness is highly stigmatized and is a taboo subject—and has been for a long time.[43] It is often seen by others—as well as lonely people themselves—as something strange or ugly; a personal weakness or failure; or a sign that there is something "wrong" with a person.[44] As one participant in the community consultations

---

[36] de Jong Gierveld, 1987; de Jong Gierveld & Kamphuis, 1985; Perlman & Peplau, 1981; Russell et al., 2012. Of note, loneliness is more profound than mere temporary irritation or dissatisfaction with others.
[37] de Jong Gierveld et al., 2009; Dykstra & Fokkema, 2007; Hawkley et al., 2008; Hawkley & Kocherginsky, 2017;Kim & Fredriksen-Goldsen, 2016; Ng & Northcott, 2015; Rook, 1984b; Yang, 2018
[38] Cacioppo & Hawkley, 2009; Cacioppo & Patrick, 2008
[39] For many people, feeling invisible and not valued appears to be a central component of loneliness (Hauge & Kirkevold, 2010; Taube et al., 2016). It should be noted that social support is related to both isolation and loneliness: in the context of isolation, it can refer to the actual amount of support received, whereas in the context of loneliness, it can be considered one's *satisfaction* with the perceived quantity and, especially, *quality*, of that support.
[40] Kitzmüller et al., 2018; The Loneliness Project: www.thelonelinessproject.org
[41] Fergusson, 2018; Hauge & Kirkevold, 2010; Kantar Public, 2016; Kvaal, Halding, & Kvigne, 2014; Laing, 2016; McInnis & White, 2001; White, 2010; Wong, 2015
[42] McInnis & White, 2001; Roos & Klopper, 2010; Roos & Malan, 2012
[43] Campaign to End Loneliness, 2016; Fergusson, 2018; Fromm-Reichmann, 1959; Kantar Public, 2016; Killeen, 1998; Laing, 2016; McHugh Power et al., 2017; Parmelee & Werner, 1978; White, 2010
[44] Dahlberg, 2007; Fergusson, 2018; McHugh Power et al., 2017; White, 2010

for this project said, “It’s really hard to admit that you are not enough to keep even *yourself* company.” Experiments indicate that when people are told someone is lonely, they will perceive them more negatively and, in turn, react in a less social manner.[45] Moreover, unless they have experienced loneliness themselves—especially chronic or intense loneliness—people often find it difficult to empathize with lonely people and may blame their misfortune on laziness, boredom, a bad attitude, or an unpleasant personality.[46] This may be due in part to confusion between terms: those who equate loneliness with social isolation may simply assume that lonely people have no friends—a situation they attribute to these negative personal characteristics. But as will be discussed shortly, many lonely people have friends and others in their lives.

Given how stigmatized they are, lonely people often feel guilty about their situation and relentlessly blame themselves.[47] Compounding their loneliness is the common perception that nobody else feels like they do—a perception that may be especially salient in big cities.[48] Pervasive media representations of abundant and satisfying relationships may also make lonely people feel deficient compared to others.[49]

Needless to say, there is great reluctance to admit loneliness, even to close friends and family.[50] 30-50% of British adults say that they would find it difficult or embarrassing to admit feeling lonely.[51] Men appear especially reluctant to divulge loneliness.[52] The stigma is so great that some would sooner admit to having a serious psychiatric disorder and may be inclined to describe their loneliness in terms of depression.[53] The reluctance of mental health professionals to broach the topic does not help matters.[54]

Besides being painful, loneliness is highly stigmatized. It is often perceived as a personal failure.

Some people even find it difficult to acknowledge loneliness to themselves[55], denying its presence or turning to non-social goals like material pursuits to avoid thinking about it.[56]

---

[45] Lau & Gruen, 1992; Rotenberg, Gruman, & Ariganello, 2002
[46] Hauge & Kirkevold, 2010. Of course, as will be discussed later, this is a kernel of truth in these perceptions, as loneliness may impel people to behave in a way that perpetuates their situation.
[47] Dahlberg, 2007; Fergusson, 2018; McHugh Power et al., 2017; McInnis & White, 2001; White, 2018
[48] ACEVO, 2015; Copeland, 2018; White, 2010
[49] Bruni, 2017; White, 2010
[50] Lee & Ko, 2017
[51] Campaign to End Loneliness, 2017; Mental Health Foundation, 2010
[52] Pinquart & Sörenson, 2001
[53] Fergusson, 2018; Olds & Schwartz, 2009
[54] Weiss, 1973; White, 2010
[55] Fergusson, 2018. Some may deny feeling lonely not only to avoid the stigma of loneliness, but perhaps also as a way to cope with it (Cacioppo & Patrick, 2008). Of course, some people may not even be aware that their feelings are, indeed, loneliness (Fromm-Reichmann, 1959).
[56] Pieters, 2013

Ironically, by avoiding discussion about loneliness, those who suffer from it may not learn that others feel the same way, too, which likely perpetuates their shame and loneliness.[57] As suggested in the community consultations, this shame may be a key reason why many lonely people avoid accessing services.[58]

Given the reluctance to admit loneliness, prevalence rates are likely underestimated.[59] In response to this problem, most measures of loneliness, including the UCLA Loneliness Scale and the de Jong Gierveld Loneliness Scale, measure it indirectly without explicitly mentioning the word "lonely" (e.g., "I feel as if nobody really understands me;" "My social relationships are superficial;" "I missing having a really close friend;" I find my circle of friends and acquaintances too limited"). To see all items from these scales, consult Appendix A for the UCLA Loneliness Scale and Appendix B for the de Jong Gierveld Loneliness Scale. For examples of other scales, see the excellent guide to measurement published by the Campaign to End Loneliness.[60]

Different Types of Loneliness

Just as different types of isolation can exist, so can different types of loneliness.[61] *Emotional/intimate loneliness* is the perceived lack of a satisfying, meaningful relationship with a significant other—a close, reliable attachment figure like a spouse or best friend who not only provides emotional support but also affirms one's value as a person. *Social/relational loneliness* is the perceived lack of quality relationships with a broader network of friends and family—people whom we see regularly and who provide emotional and instrumental support, although perhaps not as much as a spouse or best friend. Finally, *collective loneliness* is the perceived absence of a meaningful connection with a group or social identity beyond the level of individuals (e.g., workplace, voluntary organization, religion, or political party).[62]

Although beyond the scope of this report, some writers have also described *existential loneliness*—the universal, inescapable feeling that nobody truly understands who we are, how we feel, or what we are thinking.[63] Existential loneliness becomes especially pronounced at the end of life, when we realize that no matter how many people are around, we will ultimately die alone.[64] Existential loneliness also concerns fears of being completely forgotten after we die—feeling that we meant nothing to anyone.

---

[57] Copeland, 2018
[58] Other reasons may include fear of being a burden (Campaign to End Loneliness, 2017) or fear of being sent to a nursing home.
[59] Pinquart & Sörenson, 2001; Victor et al., 2000, 2005
[60] Campaign to End Loneliness, 2015a (https://www.campaigntoendloneliness.org/wp-content/uploads/Loneliness-Measurement-Guidance1.pdf)
[61] Hawkley, Browne, & Cacioppo, 2005; Hawkley, Gu, Luo, & Cacioppo, 2012; Weiss, 1973
[62] For example, Klok et al., 2017
[63] Mijuskovic, 2012, 2015; Moustakas, 1961; Tillich, 1980; Weiss, 1973; Yalom, 1090
[64] Elmer, 2018; Ettema, Derksen, & van Leeuwen, 2010; Wong, 2015

These types of loneliness appear to exist across cultures and age groups, suggesting a universal quality to the experience of loneliness.[65] This is not surprising given that different types of relationships fulfill different human needs.[66] It is important to keep these distinctions in mind when planning interventions because each type of loneliness may be associated with specific risk factors and require different solutions (e.g., absence of a partner is more likely to give rise to emotional/intimate loneliness whereas health problems, retirement, and a smaller overall social network is more likely to give rise to social/emotional loneliness).[67] It is also important to note that these forms of loneliness can occur in separately or combination.

Relationships Between Social Isolation and Loneliness

Social Isolation and loneliness are related, but only modestly.[68] Indeed, *being* alone is not necessarily the same as *feeling* alone. While isolation can increase the risk for loneliness, not all socially isolated people feel lonely.[69] Some people are perfectly satisfied with a small social network or spending time alone—the pleasant state known as *solitude.*

Isolation and loneliness are only modestly related because *being* alone is not necessarily the same as *feeling* alone.

Solitude is seen by many as an essential need of all human beings as it can help us "recharge our batteries," develop self-understanding, and improve our relationships. Indeed, well-being seems dependent upon an optimal balance between spending time with others and spending time alone.[70] Only if solitude is *unwanted* is it considered loneliness.[71] However, despite the benefits of solitude, it is likely that most people need at least a minimal amount of social contact to avoid loneliness and emotional distress.[72]

---

[65] Hawkley et al., 2005, 2012. See also van Staden & Coetzee, 2010.
[66] Weiss (1973) explains that while intimate relationships provide a sense of attachment and security, broader social relationships provide a sense of belonging, social validation, and personal identity, among important other human needs. Moreover, all types of relationships add some sense of personal meaning to one's life (Wong, 2015; see also Copeland, 2018).
[67] Baker, 2017; Dahlberg & Mckee, 2014; Dykstra & Fokkema, 2007
[68] Coyle & Dugan, 2012; Hughes, Waite, Hawkley, & Cacioppo, 2004; Matthews et al., 2016
[69] Hawkley et al., 2008; Peplau & Perlman, 1982; Victor et al., 2000
[70] Bergland et al., 2016; Crane, 2017; Dahlberg, 2007; Harris, 2017; Long & Averill, 2003; Storr, 1988; Taube et al., 2016. With age, people appear to become more comfortable with time spent alone (Pauly, Lay, Nater, Scott, & Hoppmann, 2017).
[71] Capitanio, Hawkley, Cole, & Cacioppo, 2014; Taube et al., 2016. Some have also called loneliness "failed solitude" (Fergusson, 2018).
[72] Asher & Paquette, 2003; Gawande, 2009; Nelson et al., 2014; Newton, 2002. See also Coplan et al (2018) on emotional costs of solitude at different life stages. See Crane (2017) on maladaptive solitude.

Just as it is true that not all isolated people are lonely, it is also true that not all lonely people are isolated. For example, if their relationships are perceived to be of poor quality, people can feel lonely even if they are married[73] and they can suffer negative health effects of disconnection even if they have a large social network.[74] Notably, data from the English Longitudinal Study on Aging show that over a quarter of those who report feeling the loneliest are actually among the *least socially isolated*.[75] As de Jong Gierveld and colleagues write, "An individual who is well positioned in terms of objective social participation can occupy virtually any position on the subjective continuum."[76]

"An individual who is well positioned in terms of objective social participation can occupy virtually any position on the subjective continuum."

Perhaps not surprisingly, some studies find that objective factors like marital status, living arrangement, social network size, and health explain no more than about 20% of the total variance in loneliness.[77] This is because loneliness is a highly subjective experience influenced more by relationship desires and perceived quality rather than objective qualities (e.g., actual amount of friends or social contact).[78] This is generally true across the lifespan, given that the association between perceived relationship quality and loneliness seems to remain the same or even increases with age.[79]

The importance of perceived quality is further underscored by the fact that increased contact with family members is not associated with increased longevity.[80] This may be because family relationships are characterized by high levels of commitment, which can often lead to stressful experiences (e.g., caring for a sick partner or parent). These stressful experiences can negatively impact the perceived quality of relationships and thus counterbalance whatever positive benefits are provided by these relationships.[81]

---

[73] de Jong Gierveld et al., 2009. In one study, more than half of older adults who reported chronic loneliness were married (Perissinotto et al., 2012). See also Kharicha et al., 2017.
[74] Shor & Roelfs, 2015
[75] Banks, Nazroo, & Steptoe, 2012
[76] de Jong Gierveld, Keating, & Fast, 2015
[77] E.g., Hawkley et al., 2008; Savikko et al., 2005; van Lisdonk & Kuyper, 2015
[78] de Jong Gierveld et al., 2009; Dykstra & Fokkema, 2007; Hawkley et al., 2008; Hawkley & Kocherginsky, 2017; Kim & Fredriksen-Goldsen, 2016; Nicolaisen & Thorsen, 2017; Ng & Northcott, 2015; Rook, 1984b; Yang, 2018
[79] Böger & Huxhold, 2018b; Nicolaisen & Thorsen, 2017; Qualter et al., 2015; Victor & Yang, 2012. Increases in the importance of relationship quality would be consistent with socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999; Carstensen, 2006).
[80] Pinquart & Sörenson, 2001; Shor & Roelfs, 2015
[81] Shor & Roelfs, 2015

Isolation and Loneliness in Combination: Four Different Categories

As Newall and Menec point out, the discrepancy between isolation and loneliness means that these two states can present in four combinations, each with potentially different antecedents, trajectories, health consequences, and solutions[82]:

1. *The most vulnerable group: socially isolated and lonely*. For these people, loneliness is often a consequence of social isolation. Although these people are the most difficult to reach, the provision of social contact may be a sufficient solution to their situation. However, as will be discussed later, cognitive-behavioral approaches may also be required if their isolation and loneliness have reached the point of distorting social perceptions or causing avoidant behaviour. These individuals appear to be at greatest risk for poor mental and physical health, even after controlling for sociodemographic factors.[83]

2. *"Loners"/lifelong isolates: socially isolated but not lonely*. These are often people who have a self-sufficient personality and naturally prefer spending time alone.[84] They may have also chosen not to replace social ties that have been lost over time, deriving satisfaction from a smaller number of their closest, most meaningful relationships.[85] Moreover, they may have lowered their expectations for relationships to match the reality of a shrinking social network in later life.[86] Newall and Menec argue that these individuals usually require no intervention for loneliness but may wish to consider expanding their social network given the various benefits of relationships (e.g., better health; practical support when sick).

3. *Those who are lonely in a crowd: lonely but not isolated*. These are people who may have a sufficiently large social network but may be lacking a close confidant or romantic partner or may be dissatisfied with the quality of their relationships because of real or perceived discord. For this group, genetics, personality traits, early childhood experiences, mental health problems, and unrealistic relationship expectations may be contributing to their loneliness, as will be discussed in more detail later. The provision of social contact (e.g., senior centre activities, befriending services) is often insufficient for this group.

4. *The majority group: those who are neither isolated nor lonely.* These are typically people for whom the various risk factors for isolation and isolation (to be described in more detail later) are absent. Generally, they are healthy, educated/financially stable, married, not living alone, have adult children living nearby, and are long-time residents of their neighbourhood.[87]

---

[82] Newall & Menec, 2017. See also: DePaulo, 2018; McHugh, Kenny et al., 2017; Wenger & Burholt, 2004
[83] Smith & Victor, 2018
[84] Wenger & Burholt, 2004
[85] Cloutier-Fisher, Kobayashi, & Smith, 2011; Luhmann & Hawkley, 2016; Nicolaisen & Thorsen, 2017
[86] Böger & Huxhold, 2018b; Yang et al., 2016
[87] Provided that the neighbourhood has not changed dramatically.

For some people, isolation or loneliness remain stable over time; for others, the pattern is variable[88] and they move in or out of these four categories over time.[89] For example, some may experience isolation or loneliness from childhood to adulthood[90], perhaps due to inherent personality traits (e.g., neuroticism)[91], persisting mental health problems (e.g., social anxiety)[92], or even genetic factors.[93] For them, isolation or loneliness are more like traits than states. Others may experience late-onset isolation or loneliness due to age-related changes like widowhood, deteriorating health, or becoming a caregiver.[94] Still others may become less isolated or lonely over time, such as those who manage to improve the quantity and, especially, the quality of their relationships[95], or who adapt their relationship expectations to match the new reality of their lives (e.g., reducing expectations to find a new spouse very late in life).

According to Newall and Menec, although isolation and loneliness have been studied independently, they have not been examined in the combinations described above.[96] They argue that researchers and practitioners should pay more attention to these combinations (along with the prevalence[97] of each), particularly when considering possible interventions, as what could work for one group may not work for another.

Despite the heuristic utility of the four categories described above, it should be noted that, like most human characteristics and experiences, isolation and loneliness are not truly dichotomous but, rather, exist along a continuum. We cannot really say that a person is or is not isolated or lonely; it is more realistic to say that they are higher/lower on isolation or loneliness compared to other people. Although scale developers have provided some cut-points to categorize severities of loneliness and isolation for research purposes (based on, for example, their correlation with individuals' self-assessed levels of loneliness), these cut-points are somewhat arbitrary and tentative, and it is not yet known if they are useful in practice.[98] Moreover, the demarcation of cut-points is partly dependent upon the culture and time in which they are determined. [99]

---

[88] Aartsen & Jylha, 2011; Dahlberg et al., 2015; Dykstra, van Tilburg, & de Jong Gierveld, 2005; Hawkley & Kocherginsky, 2017; Jylha, 2004; Valtorta, Kanaan, Gilbody, & Hanratty, 2016b; Victor & Bowling, 2012; Victor, Scambler, Bowling, & Bond, 2005; Yang, 2018

[89] Wenger & Burholt, 2004

[90] Caspi et al., 2006

[91] Long & Martin, 2000; Mund & Neyer, 2016. Neuroticism is an enduring , dispositional tendency to feel negative emotions (e.g., sadness, anxiety) more readily, frequently, and/or intensely than others.

[92] Lim, Rodebaugh, Zyphur, & Gleeson, 2016

[93] Gao et al., 2017; Goosens et al., 2015; Matthews et al., 2017. See also Brent et al., 2017.

[94] See Risk Factors, p. 39 onwards

[95] Hawkley & Kocherginsky, 2017; Wenger & Burholt, 2004

[96] Newall & Menec, 2017

[97] Based on older data, Newall & Menec (2017) estimate that about 22% are lifelong isolates; 6% are lonely in a crowd; 3% are isolated and lonely; and 70% are neither isolated nor lonely.

[98] de Jong Gierveld & van Tilburg, 2017. There have been even fewer attempts to establish cut-points for isolation scales. The Lubben Social Network Scale is one exception (Lubben et al., 2006).

[99] van Tilburg & de Jong Gierveld, 1999

What Social Isolation and Loneliness Are Not

Social isolation and loneliness, especially the latter, are frequently confused with other similar, but distinct concepts. For example, we often think that loneliness is just a sign of depression. This is true in some cases, but loneliness is statistically distinct from depression[100], and a person can experience one but not the other. While both are distressing, loneliness specifically reflects how we feel about *relationships.* As discussed in the next section, loneliness prompts implicit hypervigilance to social threat and specifically motivates us to repair our relationships (albeit cautiously); depression, on the other hand, reflects how we feel *in general* and often robs us of motivation altogether.[101] Moreover, it appears that loneliness is more often the cause rather than consequence of depression.[102] Of course, once depression takes hold, it is likely that it can further exacerbate loneliness (and isolation) by clouding judgments about the quality of social interactions[103] and reducing motivation to reconnect with others.

Isolation and loneliness are also distinct from introversion. Although introversion is positively associated with loneliness[104], it is not synonymous with it. Introversion is a general preference and concern for one's own inner world of thoughts and feelings rather than the outside world and other people, and is manifested in more reserved, less outgoing behaviour.[105] However, to the extent that introverted people *prefer* less social interaction, they are not lonely, and to the extent that highly social, extraverted people are unhappy with their relationships, they can certainly feel intensely lonely.

Loneliness is not the mere absence of social support. We can receive a great deal of social support yet still feel lonely.

Isolation and loneliness are also distinct from the mere absence of social support. One can receive a great deal of support yet still be isolated (e.g., if one receives support from others but lives alone or has a small social network). One can also *feel* isolated (i.e., lonely) if the support is provided by someone who is not liked or if the support is felt to be unsatisfying (e.g., if it is perceived as one-sided, intrusive, conditional, or provided out of obligation rather than genuine interest[106]). Being in a hospital, nursing home, or rehabilitation institute is a classic example: one can feel intensely lonely in such a setting even while surrounded

[100] Cacioppo, Hughes, Waite, Hawkley, & Thisted, 2006
[101] Cacioppo & Patrick, 2008; White, 2010
[102] Cacioppo et al., 2010
[103] Burholt & Scharf, 2014
[104] See, for example, Long & Martin, 2000
[105] Eysenck, 1967
[106] An example is family members who are perceived to visit out of obligation rather than interest (Hauge & Kirkevold, 2012; Heravi-Karimooi et al., 2010; McInnis & White, 2001).

by many people and receiving an abundance of support.[107] Such support may affirm one's value as a human being, but can be impersonal and is unlikely to alleviate emotional or social loneliness unless it somehow leads to satisfying personal relationships over time.[108] The confusion between loneliness and low social support may be one reason why some people are reluctant to admit feeling lonely: they may wonder how they can feel lonely if their relationships are objectively supportive. [109]

Although social isolation and loneliness are often discussed in the context of social exclusion or rejection, these are also distinct concepts.[110] While there is a great focus in the popular media and in the research literature on the need to "facilitate inclusion," it is quite possible to feel lonely even when not excluded or rejected; conversely, it is possible to experience exclusion or rejection yet not feel lonely (e.g., when experiencing rejection in one context but feeling accepted in most others).[111] Moreover, *feeling* excluded or rejected is not necessarily the same as *being* excluded or rejected.

Finally, isolation and loneliness are sometimes described as being the opposite of *social connectedness*[112], although this can more accurately considered a broad umbrella term that also encompasses related concepts such as social support, sense of community belonging, and social cohesion.[113] Given the negative effects of isolation and loneliness in particular, this report focuses on these two elements of social (dis)connectedness.

[107] British Columbia, Office of the Seniors Advocate, 2017; Dahlberg, 2007; Drageset, Kirkevold, & Espehaug, 2011; Gill, Hogg, & Dolley, 2016; Kvaal et al., 2014; Slama & Bergman-Evans, 2000; Wong, 2015
[108] Cacioppo, 2017, cited in Khazan, 2017
[109] White, 2010
[110] Stillman et al., 2009
[111] Asher & Paquette, 2003; Leary, 2015. See also Toepoel, 2013.
[112] de Jong Gierveld, van Tilburg, & Dykstra, 2016
[113] Holt-Lunstad et al., 2017

Transient vs. Chronic Loneliness

We all experience loneliness from time to time, as it is a normal part of being human. In most cases, it is temporary and we bounce back because it is "self-corrective."[114] Loneliness appears to have evolved as a biological signal to warn us when our relationship needs are not being met and motivates us to take corrective action.[115] In this sense, it is like physical pain, hunger, thirst, and other homeostatic signals that keep us safe and healthy. Consistent with this view, research indicates that the emotional pain of loneliness shares the same neurobiological pathways as physical pain.[116]

We all experience loneliness from time to time; this is a normal part of being human. It is problematic only when it becomes chronic.

This emotional pain is what distinguishes loneliness—*perceived* social isolation—from *objective* social isolation. The latter may or may not elicit pain, depending on whether the isolated person finds the situation undesirable. This pain also motivates behaviour. Indeed, loneliness is usually transient because it successfully motivates social reconnection, but in a *cautious,* tentative way. Although desiring social contact, lonely people tend to initially withdraw from social situations and become hypervigilant to cues of possible social threat.[117] From an evolutionary perspective, this paradoxical behaviour evolved as a short-term self-preservation mechanism to prevent further disconnection and promote survival in dangerous, solitary environments.[118]

Although modern life is relatively safer, our brains evolved in an environment that was more perilous. In that environment, which was characterized by small nomadic groups, people who perceived themselves to be on the edge of the social periphery felt unsafe because they had few people to rely on for protection against strangers and other sources of danger. Short-term withdrawal provided time and space to judge the social situation and make appropriate behavioural changes without risking further disconnection, while hypervigilance for social threat helped to avoid trusting or confiding in duplicitous people.[119] After assessing their situation and making appropriate changes, most lonely people would successfully reconnect and their loneliness would subside. Although this self-protective mechanism may be anachronistic today, it is the product of millions of years of evolution and has yet to be fully calibrated to our modern environment.

---

[114] Qualter et al., 2015
[115] Cacioppo et al., 2013; Cacioppo, Cacioppo et al., 2014; Cacioppo & Patrick, 2008; Qualter et al., 2015
[116] Eisenberger, 2012a,b. Intriguingly, it has been shown that administration of the painkiller acetaminophen can reduce neural responses to social rejection (DeWall et al., 2010).
[117] Qualter et al., 2015
[118] Cacioppo et al., 2013; Cacioppo, Cacioppo et al., 2014
[119] Ibid., Qualter et al., 2015

From Adaptive to Maladaptive: The "Lonely Social Cognition"

For a minority of people, something goes awry with the normally time-limited re-affiliation process described above. They develop a "lonely social cognition" characterized by *excessive* vigilance for social threats and an overly suspicious interpretation of neutral or ambiguous social cues.[120] They focus excessively on negative aspects of social interactions and find positive ones less rewarding.[121] As a result, they continually feel exposed and under threat in social situations.[122]

This pattern causes "every social molehill to look like a mountain."[123] It also leads to social anxiety, prolonged withdrawal, excessive self-focus, and aversive behaviours that, paradoxically, push people away rather than draw them in (e.g., being passive, aloof, distrustful, and judgmental, or even ignoring people and rejecting offers of friendship).[124] In response to these behaviours, others avoid interacting with the lonely person, under the assumption that they are rude or want to be left alone; this in turn reinforces the lonely person's negative expectations of others, creating a self-reinforcing feedback loop of chronic loneliness.[125]

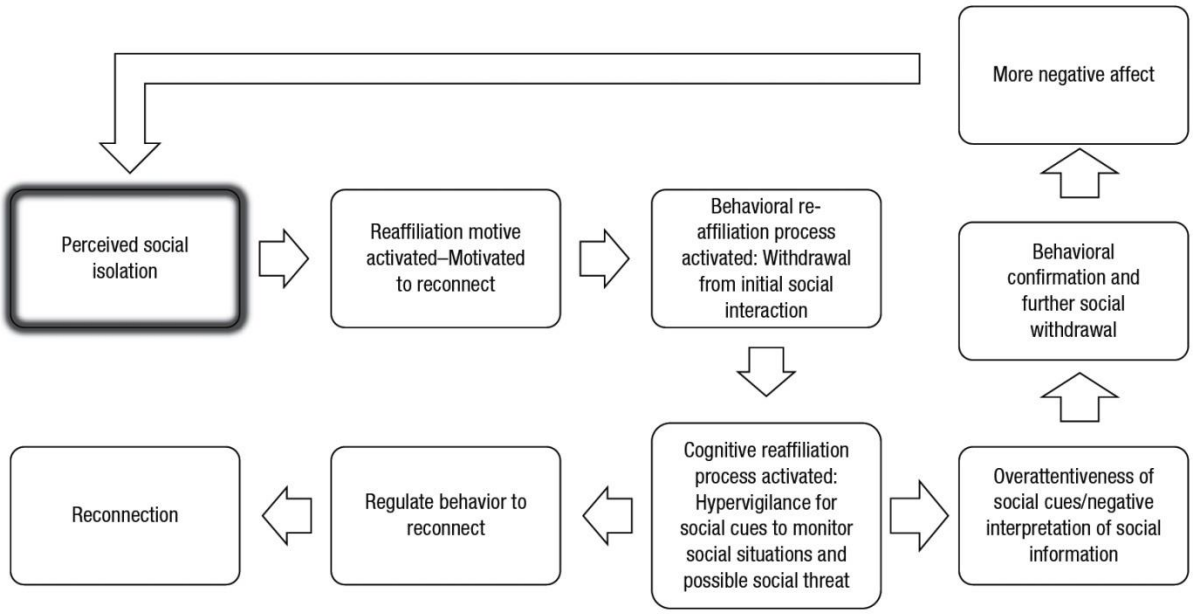
People who are stuck in this cycle of fear and withdrawal are essentially experiencing an endless state of "fight or flight," which is likely one of the key mechanisms by which chronic loneliness undermines health.[126] To make matters worse, the negative health effects arising from this state can further exacerbate and reinforce isolation and loneliness (e.g., people become lonelier as they get sick and cannot leave the house).

Of note, people stuck in this cycle often have little insight into how their perceptions and behaviours are exacerbating their situation, and they attribute their loneliness to factors beyond their control.[127] For these people, the intuitive recommendation to just "make more friends" is unlikely to be helpful and may be continually resisted—even if their situation is demonstrably harmful to their health (e.g., refusing home care support).[128]

The figure on the next page illustrates this counterproductive feedback loop.

---

[120] Cacioppo & Hawkley, 2005, 2009; Cacioppo et al., 2013; Goll et al., 2015. For example, a lonely person might assume that a workmate's terse tone means that the colleague does not like him, when in reality the workmate is simply having a bad day.
[121] Cacioppo, Balogh, & Cacioppo, 2015; Cacioppo, Norris, Decety, Monteleone, & Nusbaum, 2009
[122] White, 2010
[123] Cacioppo & Patrick, 2008, p. 31
[124] Cacioppo, Chen, & Cacioppo, 2017; Cacioppo & Hawkley, 2005, 2009; Cacioppo et al., 2013; Lim et al., 2016; Rotenberg, 1994
[125] Ibid., Fergusson, 2018
[126] Cacioppo & Hawkley, 2009. See also Böger & Huxhold, 2018a.
[127] Cacioppo, Hawkley, & Correll, 2013; Newall et al., 2009
[128] Elmer & Campbell, 2016; Weiss, 1973, White, 2010



Source: Qualter, P., Vanhalst, J., Harris, R., Van Roekel, E., Lodder, G., Bangee, M., Maes, M., & Verhagen, M. (2015). Loneliness across the life span. *Perspectives on Psychological Science, 10*(2), 250-264. © 2015 by Qualter et al. Reprinted by permission of SAGE Publications, Inc.

The transition from temporary[129] to chronic loneliness may be due to factors that disrupt parts of the normal re-affiliation process initiated by loneliness. Examples are intractable social isolation (e.g., being homebound due to illness or disability); persistent rejection beyond one's control; personality traits (e.g., innate rejection sensitivity, mistrustfulness, or neuroticism); low self-worth; external locus of control; and genetics (e.g., genes for prosocial behaviour, attention processing, and sensitivity to negative social information).[130]

For many people suffering from chronic loneliness, the intuitive suggestion to "just make more friends" is unlikely to be helpful.

While personality traits can increase the risk for this cycle, the cycle itself can also alter personality traits. When induced to feel lonely in an experimental manipulation, previously gregarious, confident, and agreeable people became socially awkward, shy, angry, self-conscious, and pessimistic.[131] In line with this finding, a longitudinal study following adults for 15 years found that neuroticism predicts increases

[129] Some authors distinguish between *three* temporal forms of loneliness: transient (short-term, often due to lack of social contact on a particular day or during bad weather); situational (occurring after stressful life events like widowhood); and chronic (de Jong Gierveld & Raadschelders, 1982).
[130] Qualter et al., 2015; Vanhalst et al., 2015; Watson & Nesdale, 2012
[131] Cacioppo, Hawkley, Ernst, Burleson, Berntson, Nouriani, & Spiegal, 2006

in loneliness over time, but that loneliness also predicts increases in neuroticism and decreases in extraversion and conscientiousness over time.[132]

In addition to the cognitive feedback loop described above, loneliness can perpetuate itself via other processes. For example, prolonged social isolation could lead to learned helplessness—a feeling of powerlessness and apathy resulting from repeated inability to expand or improve one's social network.[133] This, in turn, could result in hopelessness[134], reducing the motivation to interact with others (even when support and companionship are offered), thus leading to further isolation and loneliness. In effect, the person does not move beyond the second stage in the model described above. Loneliness could also cause negative affect[135], depression[136], and hostility[137], all of which can lead to social withdrawal, aversive interpersonal interactions, and, eventually, a smaller social network and more loneliness.[138] As discussed later, unresolved relationship conflict and unrealistically high expectations can also prolong loneliness.

While not all cases of chronic loneliness are characterized by the processes described above, they likely play an important role in many of them given that cognitive restructuring seems to be more effective in reducing loneliness compared to simple provision of social contact.[139] The role of social cognition is further underscored by the delusions and withdrawn, disorganized behaviour that characterize many severe cases of social isolation (e.g., prisoners in solitary confinement[140], institutionalized orphans[141], feral children[142], and primates reared in isolation[143]).

To summarize, while certain factors may *cause* some people to become lonely in the first place, a maladaptive lonely social cognition can *keep* them that way.[144] This is why many people say that loneliness can become a barrier in and of itself: not only must they cope with whatever problems may have triggered the loneliness in the first place, they must also contend with the physical and mental health effects caused by the

---

[132] Mund & Neyer, 2016. Note that this study examined young adults; it is not known if these same patterns exist among older adults. Moreover, these relationships may change over time. For example, a recent study found that the reciprocal relationship between loneliness and negative affectivity (NA) decreases over time, as does the strength of NA as a mediator linking loneliness and poor health (Böger & Huxhold, 2018a). The study also found that the relationship between social integration and loneliness increases over time. This suggests that psychological factors may play a greater role in loneliness among young people, whereas situational factors may play a greater role among older people.
[133] J. Qualter, personal communication, 2015
[134] Taube et al., 2016
[135] Böger & Huxhold, 2018a; Cacioppo et al., 2006a
[136] Cacioppo, Hawkley, & Thisted, 2010; Lim et al., 2016
[137] Cacioppo et al., 2006a; Theeke et al., 2015. See also DeWall, Twenge, Gitter, & Baumeister, 2009.
[138] Böger & Huxhold, 2018a
[139] Masi et al., 2011
[140] Gawande, 2009
[141] Nelson et al., 2014
[142] Newton, 2002
[143] Blum 1994, 2002
[144] Cacioppo & Patrick, 2008

Chronic loneliness itself can become a barrier to social participation, compounding the problems that caused it.

loneliness itself, which often takes on a life of its own.[145] In these cases, cognitive distortions and self-defeating behaviours must be addressed before the issues that triggered the loneliness to begin with. But even those who recover are not necessarily of the woods: recovery can be hampered by the anxiety some people feel that their loneliness will return. In an effort to avoid this anxiety, they may preemptively withdraw from social interaction, thus re-starting the cycle.[146] For these people, there is some sense of predictability and safety in being alone.

Before closing this section, it should be noted that although chronic loneliness is a risk factor for mental illness, it is not necessarily a mental illness itself, as is sometimes implied in the language that we use.[147] Indeed, even mentally healthy people could develop a "lonely social cognition" if they find themselves in unfortunate, intractable circumstances (e.g., they become homebound because of illness or disability). Only in severe cases, where social cognition is significantly distorted, could chronic loneliness evolve into a mental illness. In addition, although there are many individual factors that can perpetuate loneliness (e.g., social perceptions, causal beliefs, genetics), this does not mean that people should be blamed for their situation. Many of these factors are beyond conscious awareness and are difficult (but not impossible) to control or change.

Prevalence of Isolation and Loneliness

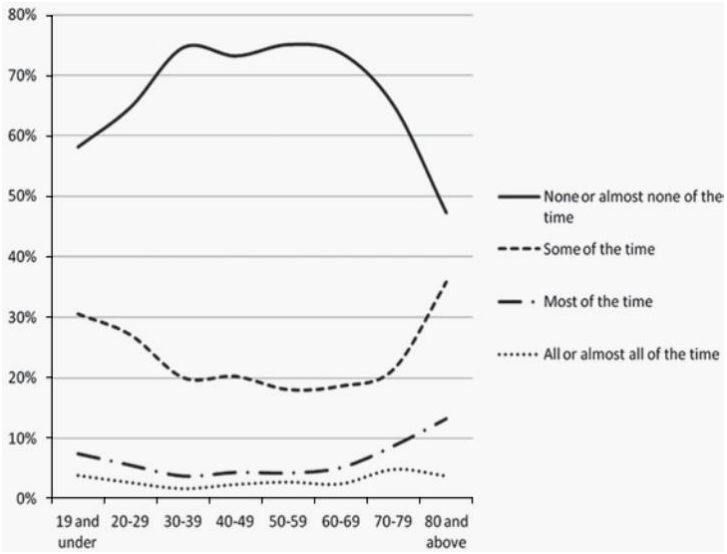
Measuring the prevalence of isolation and loneliness is difficult given the absence of universally accepted definitions, the multiplicity of measurement instruments, and whether these problems are assessed in terms of intensity, frequency, or duration. Despite these challenges, some general patterns can be discerned from the data.

Depending on the definition, approximately 15-20% of community-dwelling adults aged 65+ are socially isolated.[148] If isolation is defined as living alone, about one-fifth of older men and one-third of older women are isolated[149]; however, many people who live alone have adequate social networks outside the home and so they are not isolated. One caveat is that the prevalence of extremely isolated people is not well known given that these people are often hidden, so prevalence rates may be higher than reported.[150]

---

[145] Kantar Public, 2016
[146] ACEVO, 2015, p. 30
[147] E.g., Latson, 2018; V. Murthy, 2017, cited in McGregor, 2017
[148] These numbers are for Canada, the United States, and the United Kingdom: Beach & Bamford, 2016; Flowers et al., 2017; National Seniors Council, 2018; Statistics Canada, 2015; Steptoe et al., 2013.
[149] Statistics Canada, 2017
[150] Goodman, Adams, & Swift, 2015

Although young people can experience social isolation, limited research examining isolation across the entire lifespan suggests that it is more common among seniors.[151] On the other hand, loneliness (i.e., *perceived* social isolation), appears to have a more complex pattern. Young people can and do feel lonely[152], challenging misconceptions that this is only a "seniors' issue."[153] In fact, several studies in different countries suggest that loneliness follows a non-linear, "U-shaped" curve over the lifespan[154], as depicted on the right, with highest rates among young people and those 80+.[155]



Source: Keming Yang and Christina Victor (2011). Age and loneliness in 25 European nations. *Ageing and Society, 31*(8), 1368-1388. Reprinted with permission.

Survey results vary[156], but around one-fifth to one-quarter of middle-aged and young-old adults experience moderate loneliness (i.e., defined as feeling lonely "some of the time") compared to around one-third of adolescents, young adults, and those aged 80+. Severe loneliness (feeling lonely "often" or "all the time") is experienced by around 5%-10% of middle-aged and young-old adults and around 10-15% of adolescents, young

[151] Lelkes, 2011

[152] ACEVO, 2015; Asher & Paquette, 2003; BBC, 2016a; Brinded, 2018; Bruni, 2017; Cigna, 2018; Copeland, 2018; Kantar Public, 2016; Lambert, 2016; Loneliness Project (www.thelonelinessproject.org); Matthews et al., 2016; Perlman & Landolt, 2009; Qualter et al., 2015; Schinka et al., 2012; Vanhalst et al., 2013

[153] Dykstra, 2009

[154] Dykstra, 2009; Lasgaard et al., 2016; Pinquart & Sörenson, 2001; New Zealand Ministry of Social Development, 2016; Nicolaisen & Thorsen, 2017; Richard et al., 2017; Yang & Victor, 2011. For a more complex age pattern, see Luhmann & Hawkley, 2016.

[155] A detailed discussion of this age pattern is beyond the scope of this report, but likely involves the influence of events and issues more prevalent at earlier and later stages of life (e.g., greater number of singles among both young and older adults; feeling misunderstood and concerns about peer acceptance among teenagers; financial problems among young adults; health problems, mobility limitations, and widowhood among older adults). Age-related differences in personality may also play a role. For example, loneliness is associated with neuroticism (Long & Martin, 2000; Mund & Neyer, 2016), and young people tend to be higher in neuroticism compared to other age groups (Roberts & Mroczek, 2008). Maturational differences in processing of social information may also be influential (Qualter et al., 2015).

[156] Brinded, 2018; Mental Health Foundation UK, 2010; Lasgaard et al., 2016; New Zealand Ministry of Social Development, 2016; Nicolaisen & Thorsen, 2017; Nyqvist et al., 2016; Pinquart & Sorensen, 2001; Richard et al., 2017; Qualter et al., 2015; Vanhalst et al., 2013; Victor & Yang, 2012; Yang & Victor, 2011. See also Child & Lawton, 2017.

adults, and people aged 80+. Similar results are found when measuring loneliness in terms of *intensity* rather than frequency (i.e., *how lonely* a person feels right now vs. *how often* they feel lonely in general).[157] Longitudinal studies tracking the same middle-aged and older adults over time reveal a similar pattern, with loneliness increasing over time, especially among the very old.[158] A recent longitudinal study suggests that loneliness may start rising even earlier.[159]

Chronic isolation and loneliness are not just "seniors' issues;" given the right combination of factors, they could happen to anyone.

In contrast, two U.S. cross-sectional studies and one by the Vancouver Foundation suggest that loneliness steadily *declines* over time, even in later life.[160] A German longitudinal study found that while social network size and frequency of contact declines from midlife to later life, loneliness does not change.[161] It is unknown to what extent these findings are due to measurement issues like restricted age range and sampling bias. For example, the "oldest old" and those with the poorest health—people who may be loneliest—may also be least likely respond to surveys. More research is needed with wider age ranges.

Social isolation and loneliness are prevalent not only in the general community but also within residential care, including geriatric wards, nursing homes, and rehabilitation centres.[162] In one survey, 50% of nursing home residents reported feeling lonely.[163] In general, the prevalence of loneliness among seniors in these facilities is higher than in the general community[164], and the prevalence of *severe* loneliness may be up to twice as high.[165] In British Columbia, a recent survey of 22,000 individuals in 292 residential care facilities revealed that nearly half of residents do not consider any other residents to be a close friend, and half indicate that they have nobody to do things with.[166]

Although some longitudinal research suggests that lack of social activity and loneliness might increase the risk for early admission into residential care (even after controlling for

---

[157] Hansen & Slagsvold, 2016; Nicolaisen & Thorsen, 2014; Statistics Netherlands, 2016
[158] Aartsen & Jylha, 2011; Cohen-Mansfield et al., 2009; Dahlberg et al., 2015; Dykstra, van Tilburg, & de Jong Gierveld, 2005; Jylha, 2004; Tijhuis, de Jong Gierveld, Feskens, & Kromhout, 1999
[159] Mund & Neyer, 2016
[160] Cigna, 2018; Vancouver Foundation, 2017; Wilson & Moulton, 2010
[161] Böger & Huxhold, 2018a
[162] Gill et al., 2016; Kvaal et al., 2014; Roos & Malan, 2012; Slama & Bergman-Evans, 2000; Slettebö, 2008
[163] Drageset, Kirkevold, & Espehaug, 2011
[164] Ferreira-Alves, Magalhaes, Viola, & Simoes, 2014; Nyqvist et al., 2013; Pinquart & Sörenson, 2001; Prieto-Flores et al., 2011
[165] Savikko et al., 2005; Victor, 2012
[166] British Columbia, Office of the Seniors Advocate, 2017

other confounding factors like poor health)[167], it is quite possible that the negative characteristics of some residential care facilities may play a role in contributing to loneliness.[168]

Older LGBTQ+ seniors may be especially prone to social isolation or loneliness in residential care, given real and perceived experiences of stigma and discrimination from other residents and even staff.[169] To avoid these experiences, some LGBTQ+ seniors may "go back into the closet" and hide their sexual orientation or gender identity; this can contribute to lack of intimacy and a profound sense of disconnection from staff and other residents.[170]

As argued by Newall and Menec[171], it is also important to gauge the prevalence of different combinations of isolation and loneliness. Unfortunately, isolation and loneliness are usually studied separately, leaving a paucity of prevalence data. Based on older figures, they suggest that about 22% of people are lifelong isolates (isolated but not lonely); 6% are lonely in a crowd (lonely but not isolated); 3% are in the vulnerable group (isolated and lonely); and 70% are neither isolated nor lonely.

Relevance to Aging

Although isolation and loneliness are not specific to older adults, they are of particular concern in this population because they add to the health burden already caused by age-related declines in health. Moreover, isolation and loneliness in early life have persistent and cumulative effects on health in later life,[172] causing a "wear and tear" on the body that becomes more pronounced over time and that may even hasten the aging progress.[173] The visibility of these health effects may be a key reason why social isolation and loneliness are receiving so much attention in contemporary society; when the human lifespan was shorter, these effects were likely not visible.

---

[167] Miller et al., 2014; Pynnönen et al., 2012; Russell, Cutrona, de la Mora, & Wallace, 1997; Tijhuis et al., 1999. Some studies, however, have not found this association (e.g., Dykstra et al., 2005).
[168] E.g., insufficient time (or training) to build relationships with residents; language barriers; gossiping among residents; rigid rules regarding seating arrangements at dinner; feeling dependent and useless because there are no opportunities to do things for others (British Columbia, Office of the Seniors Advocate, 2017; Hicks, 2000; Roos & Malan, 2012; Slama & Bergman-Evans, 2000; Slettebö, 2008).
[169] Justice in Aging, 2015; Sage, 2010; White & Gendron, 2016. Even in facilities where there is no discrimination, the long history of discrimination experienced by LGBTQ+ elders may predispose some of them to perceive discrimination where it does not exist and to readily anticipate rejection (Elmer, van Tilburg, & Fokkema, 2018; Kuyper & Fokkema, 2010).
[170] Maddux & Applebaum, 2010
[171] Newall & Menec, 2017
[172] Caspi et al., 2006; Lacey, Kumari, & Bartley, 2014; Yang et al., 2016
[173] Cacioppo & Hawkley, 2003; Hawkley & Cacioppo, 2007. See also Ong, Rothstein, & Uchino, 2012.

Chronic isolation and loneliness are associated with increased healthcare use and healthcare costs.

Isolation and loneliness are also associated with fears specific to later life: fear of dependency due to illness, disability, or relocation.[174] They are also associated with poorer medication adherence, increased emergency room visits, hospitalization, re-hospitalization, delayed hospital discharge, and earlier nursing home admission.[175] This is not surprising given the health effects of (chronic) isolation and loneliness.

Some studies have found an association between isolation/loneliness and healthcare use even after accounting for health status, suggesting that some people may be using medical services for social contact in addition to (or instead of) health-related reasons.[176] As other studies have found no such effect, more research is needed before making any conclusions.[177] Regardless of the specific reasons for increased use of healthcare services, the financial impact is evident, as both loneliness and isolation are associated with increased healthcare costs.[178]

Isolation and loneliness may also be linked to greater contact with the criminal justice system. For example, in Japan—a country that struggles to cope with a rapidly aging population—some seniors reportedly try to avoid social isolation and loneliness by engaging in petty criminal activity and going to jail. As one senior writes:

> I enjoy my life in prison more. There are always people around, and I don't feel lonely here. When I got out the second time, I promised that I wouldn't go back. But when I was out, I couldn't help feeling nostalgic.[179]

Another key reason that isolation and loneliness are of particular relevance to seniors is that some risk factors, such as smaller network size, age-related physical decline, cognitive impairment, and widowhood, are more prevalent in later life[180] (but as will be discussed later, many risk factors are common across age groups). Moreover, the tendency for loneliness to motivate social withdrawal may be more pronounced in later life, when older adults' social engagement becomes increasingly dependent on self-initiation rather than external pressures like work and parenting commitments.[181]

---

[174] Taube et al., 2016; Theeke et al., 2015
[175] Gerst-Emerson & Jayawardhana, 2015; Giuli et al., 2012; Greysen et al., 2013; Landeiro et al., 2016; LaPorte et al., 2008; Mistry et al., 2001; Molloy et al., 2010; Newall et al., 2015; Russell et al., 1997; Segrin & Passalacqua, 2010; Tijhuis et al., 1999. See also Miller et al., 2014; Pynnönen et al., 2012.
[176] The stigma surrounding loneliness may also play a role: patients may feel more comfortable discussing real (or perhaps even non-existent) physical problems rather than divulge feeling lonely.
[177] Valtorta et al., 2018
[178] Flowers et al., 2017; McDaid, Bauer, & Park, 2017; Shaw et al., 2017
[179] Fukada, 2018
[180] Luhmann & Hawkley, 2016; Nicolaisen & Thorsen, 2017; Wrzus et al., 2013
[181] Böger & Huxhold, 2018a

In the City of Vancouver, social isolation and loneliness are of particular concern as there will be a 79% increase in population of local residents aged 65-74 and a 105% increase in those aged 75+ over the next 25 years. Moreover, a survey by Vancouver Coastal Health found that over half of community-dwelling residents aged 65 and older have only three or fewer people in their social network they can confide in; more troubling, 6% of all residents in the greater Metro Vancouver Region have *no one* to confide in.[182] According to surveys by the Vancouver Foundation, 25% of all Metro residents are alone more often than they would like and 14% report feeling lonely often or almost always.[183] In addition, one in five Metro residents do not know any neighbours well enough to ask for help.[184] At a broader level, about a quarter of Metro residents aged 65 and older say they do not feel a sense of community belonging.[185] Despite potential methodological issues with these surveys[186], isolation and loneliness in Vancouver deserve close attention.

Increasing Problems?

Some researchers and journalists argue that people have become more socially isolated and lonelier over time due to increasing longevity and a host of social and cultural changes: individualism, geographic mobility, rising divorce rates, fewer multigenerational households, secularization, declining membership in civic organizations, more part-time work, telecommuting, and excessive social media use.[187]

Others disagree, arguing that the current evidence does not support the claim of rising isolation and loneliness in the preceding decades; in fact, they cite some studies that suggest a slight *decline* in these problems.[188] These authors argue that while the nature of our relationships may be changing over time, we still find ways to meet our social needs and therefore avoid social isolation and loneliness.[189]

---

[182] Vancouver Coastal Health, 2015, 2018. The 6% figure is the average across all age groups.
[183] Vancouver Foundation, 2012a, 2017. This is an average figure for the entire sample, as the report did not provide sufficient information to make detailed comparisons across age groups.
[184] Vancouver Foundation 2012a. Average figure across all age groups.
[185] Vancouver Coastal Health, 2015, 2018
[186] Although the samples in these studies were demographically weighted to resemble the overall demographic composition of Vancouver, respondents were not selected in a manner that permits true generalization to the entire population of Vancouver. Participants in the Vancouver Foundation study were selected from an online commercial panel. Participants in the Vancouver Coastal Health study were recruited entirely from the Internet. Due to the possible confounding influence of self-selection bias when using these methods, the results should be interpreted with caution. Moreover, given the lack of comparable data on isolation and loneliness from other cities, we cannot say with much certainty whether the situation in Vancouver is particularly unique, as is often suggested (e.g., Kassam, 2017).
[187] Konnikova, 2013; Lunstad et al., 2017; Marche, 2012; McPherson et al., 2006; Olds & Schwartz, 2009; Putnam, 2000; Turkle, 2011
[188] Dahlberg, Agahi, & Lennartsson, 2018; Dykstra, 2009; Eloranta et al., 2015; Fischer, 2011, 2012; Honigh-de Vlaming et al., 2014; Klineberg, 2012a,b; US Senate, 2018; Victor et al., 2002, 2012
[189] DePaulo, 2006; Fischer, 2011, 2012; Klineberg, 2012b

Where there may some changes, however, is in the *frequency* of isolation and loneliness. For example, while the proportion of British people indicating that they feel lonely *most or all of the time* has remained relatively consistent over the decades, the proportion of people indicating that they *never* feel lonely appears to be declining somewhat, whereas the proportion indicating that they feel lonely *sometimes* appears to be increasing.[190] It is unknown if this is due to real changes vs. methodological artifacts[191] or increasing comfort in admitting isolation and loneliness (given the fact that these issues are receiving increased attention).

Whether or not the *proportion* of isolated and lonely seniors is increasing, it is likely that the *absolute number* will steadily increase due to population aging.

It may be that while isolation and loneliness are not rising, concern about these issues is, perhaps due to our growing awareness of their hazards.[192] Sensationalistic media coverage and misuse of words like "crisis" and "epidemic"[193] may also be creating what some have called a "loneliness scare," making these problems seem more prevalent than they actually are.[194] Yet others argue that, "despite claims of a new crisis, one can find similar concern with the problem of loneliness going back many decades."[195]

The conflation of transient and chronic forms of isolation and loneliness may also be contributing to the perception of an epidemic and may even trivialize the suffering of those who genuinely struggle with these problems. As Cacioppo writes, "to call it an epidemic of loneliness risks having it relegated to the advice columns."[196] The sentiment is echoed by Klineberg: "Overstating the problem can make it harder to make sure we are focusing on the people who need help the most."[197]

Another reason may be the increasing use of isolation and loneliness as issues that highlight the "hazards" of aging, the need for additional seniors' resources, the value of volunteer work, and the necessity of broader political change.[198]

Whether or not the actual proportion of isolated and lonely seniors is increasing, one thing is fairly certain: the *absolute number* of isolated and lonely people will likely increase due to population aging. This could have significant public health implications.

---

[190] Victor, 2011
[191] Apparent increases may be due to interviewer effects as well as respondent priming, fatigue, and training effects (e.g., Brashears, 2011; Paik & Sanchagrin, 2013).
[192] DePaulo, 2018; Kleinberg 2012a
[193] Brinded, 2018; Entis, 2016; Hafner, 2016; Latson, 2018; Renzetti, 2013. See also Rothstein, 2014.
[194] Ferreira-Alves et al., 2014; Fischer, 2012
[195] United States Senate Joint Economic Committee, 2018
[196] Cacioppo, 2009
[197] Klineberg, 2018
[198] Agren, 2017

Risk Factors

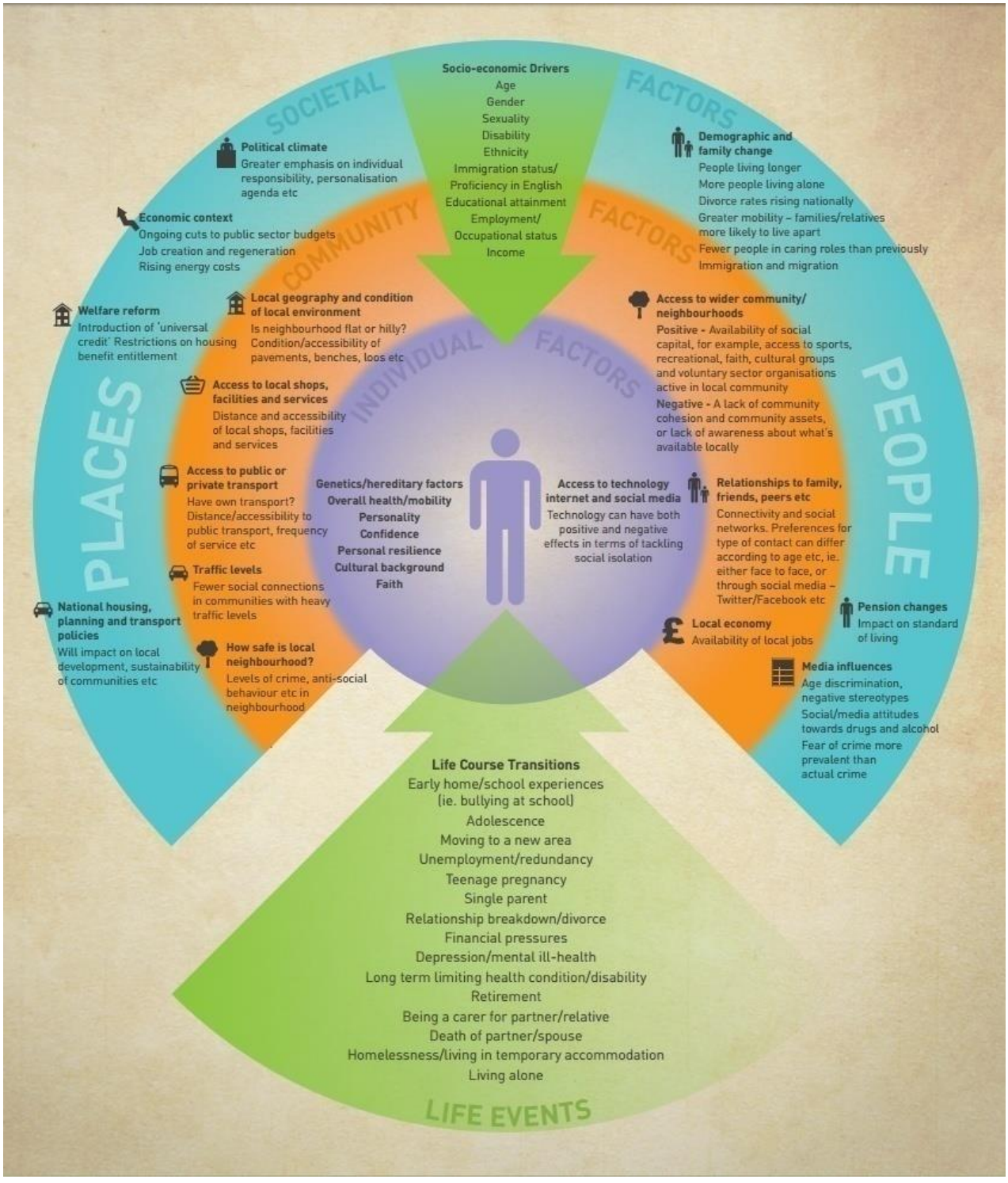
Risk factors for isolation and loneliness can be divided into four categories: individual, relational, community, and societal.[199] While the frequency of many risk factors differs across age groups (e.g., more health problems among older adults), so does their relative impact. Although some factors contribute similarly to risk of isolation or loneliness across the lifespan (e.g., minority status, mental health problems), some seem to matter more at specific life stages (e.g., lack of a partner in later life and, even more so, midlife, but less so in early life; low income or unemployment in midlife).[200] The effect of negative emotions also seems to follow an age-graded pattern, having less impact on loneliness over time.[201] For other factors, like poor relationship quality, small network size, infrequent social contact, poor physical health, and disability, research is mixed: some studies find that these factors contribute more to loneliness among young and middle-aged adults vs. older adults[202], while others find the opposite[203] or no age difference.[204] Geographic or measurement differences may explain some discrepancies.

Risk factors can function independently or in combination.[205] For some people, there may be just one factor that causes isolation or loneliness, but more commonly, several factors are responsible. When occurring together, risk factors can be *additive* (i.e., as risk factors accumulate, the chance of isolation or loneliness increases) or *synergistic* (i.e., the presence of one risk factor increases the effect of another risk factor, such that the *total combined effect* of both risk factors is larger than the sum of their independent effects). Risk factors can also occur in a causal chain. For example, poor health could lead to depression, which itself could lead to loneliness; conversely, loneliness could lead to depression, which in turn could lead to poor health.[206] The chart on the next page summarizes the risk factors for isolation and loneliness.

---

[199] Clarke & McDougall, 2014. See also Hawkley et al., 2008, for a "filtration model" of risk factors.
[200] Lasgaard et al., 2016; Luhmann & Hawkley, 2016; Nicolaisen & Thorsen, 2017; Statistics New Zealand, 2013; Wister & Menec, 2018. According to Luhmann and Hawkley (2016), lacking or losing a partner may be a greater risk for loneliness among middle-aged and older adults because young adults foresee a longer future in which to find a life partner. The impact of risk factors may also differ due to age-normative goals. For example, low income, unemployment, and being without a partner may contribute more to loneliness among middle-aged adults vs. other age groups because making money, getting married, and starting a family are key developmental goals and sources of self-esteem during this period.
[201] Perhaps because we are more forgiving of older adults' negative emotions (Böger & Huxhold, 2018a).
[202] Lasgaard et al., 2016; Nicolaisen & Thorsen, 2017; Stickley & Koyanagi, 2018; Victor & Yang, 2012. According to these researchers, health problems in early and middle adulthood may interfere with age-normative milestones related to career and family (e.g., childrearing), which are less relevant to older adults. Moreover, older adults may anticipate and therefore better adapt to health changes in later life. For children and adolescents, loneliness is particularly related to age-normative desires for peer acceptance, popularity, and frequent social contact, as well as idealistic relationship expectations (Asher & Paquette, 2003; Qualter et al., 2015).
[203] Böger & Huxhold, 2018a; Choi, Kwon, Lee, Choi, & Choi, 2018; Victor & Yang, 2012
[204] Böger & Huxhold, 2018b; Luhmann & Hawkley, 2016; Nicolaisen & Thorsen, 2007; Statistics NZ, 2013
[205] Holt-Lunstad, 2018b; National Seniors Council, 2017
[206] Uchino, 2006. The author discusses social support but the pathways may apply to isolation/loneliness.

Overview of Risk Factors for Isolation and Loneliness



Source: Dave Clarke and Liz McDougall (2014). *Social isolation in Bristol: Risks, interventions and recommendations report*. Bristol, UK: Bristol City Council. Reprinted with permission.

Individual Risk Factors

Individual risk factors are characteristics of individuals that operate in the background to shape living conditions and social interactions. They include low income; language barriers; pre-existing physical health conditions; vision and hearing impairment; and mobility challenges.[207] In addition to the obvious ways in which these factors may impede social interaction (e.g., being unable to leave the house), the shame and stigma associated with these problems may also lead to social isolation and loneliness.[208]

Advanced age. Adults aged 75+ are at increased risk for isolation and loneliness, but mostly because advanced age is associated with other risk factors like chronic health problems, functional limitations, and widowhood. Thus, old age in itself is not a risk factor.[209] This is an important point as it challenges a prevalent ageist stereotype that older adults are disinterested in social contact and are in a natural process of disengaging from the world—stereotypes that may be reflected in both theory and empirical research on aging.[210]

Gender. The relationship between gender, isolation, and loneliness is mixed. If isolation is defined as living alone, women are more isolated than men[211], but if isolation is defined more broadly, it appears that men may be at greater risk[212], perhaps because women more readily form and nurture a diverse social network.[213] In terms of loneliness, meta-analyses find that women are more likely than men to report loneliness, but this is more often the case when direct measures of loneliness are used.[214]

When indirect measures are used, the gender differences are smaller, suggesting that men may be especially reluctant to report loneliness, which is not surprising considering that lonely men are perceived more negatively than lonely women.[215] To the extent that real gender differences remain, they are likely due to the fact that older women tend to outlive their partners, have more health problems, and experience greater financial hardship with age.[216]

---

[207] Böger & Huxhold, 2018a; Cohen-Mansfield et al., 2016; Courtin & Knapp, 2017; de Jong Gierveld et al., 2009, 2016; Hawkley & Kocherginsky, 2017; Luhmann & Hawkley, 2016; National Seniors Council, 2014, 2017; Ong, Uchino, & Wethington, 2016; Pronk et al., 2013; Savikko et al., 2005.
[208] Lupton & Seymour, 2000
[209] Lasgaard et al., 2016; Luhmann & Hawkley, 2016
[210] Cumming & Henry, 1961 (disengagement theory); Schaie, 1988
[211] Statistics Canada, 2015
[212] Dykstra & Fokkema, 2007; Victor et al., 2006
[213] Beach & Bamford, 2016
[214] Pinquart & Sörenson, 2001. See also Shiovitz-Ezra & Ayalon, 2012
[215] Lau & Gruen, 1992
[216] Aartsen & Jylha, 2011; National Seniors Council, 2017

Other research has found an opposite pattern of loneliness when looking at older adults who *live alone*: older women who live alone report less loneliness than older men who live alone[217], perhaps because men are more likely to rely on an intimate partner for companionship.[218] Consistent with this hypothesis is that widowhood predicts loneliness more strongly for men more than for women.[219] Gender differences also exist when looking at different *types* of loneliness: controlling for other factors, including partner status and social contact frequency, there appear to be no gender differences in *emotional* loneliness, but men appear more likely to experience *social* loneliness[220], perhaps because they are less inclined than women to confide in friends and family.[221]

Men appear to be more likely than women to experience social/relational loneliness.

Education. Several studies have found that lower level of education is also a risk factor, even after accounting for other variables associated with it, such as low income.[222] Other studies, however, have reported different findings. For example, a study of older men in the United Kingdom found that a low level of education is only weakly associated with social isolation and not at all associated with loneliness once other factors are taken into account.[223] Interestingly, a large German study found that a *higher* level of education is associated with increased loneliness after accounting for other factors.[224] More research is needed to verify and explain this finding. For example, do people with more education actually have fewer high-quality relationships than less-educated people, or do they have higher standards for evaluating the quality of their relationships?[225]

Minority status. Ethnic minority, Indigenous, and LGBTQ+ seniors are at increased risk for isolation and loneliness in part due to lifelong experiences with stigma, discrimination, rejection sensitivity, and cultural integration issues.[226] The nature and dynamics of social relationships within these groups also plays a role. For example, immigrant seniors may wish to see their adult children more often, who may hold

[217] Beach & Bamford, 2016; Wister & Menec, 2018
[218] Wister, 2018
[219] Dahlberg et al., 2015; Nicolaisen & Thorsen, 2014. See also Wister & Menec, 2018.
[220] Dahlberg & McKee, 2014
[221] Wister & Strain, 1986, cited in Dykstra & Fokkema, 2007
[222] Hansen & Slagsvold, 2016; Hawkley et al., 2008; Savikko et al., 2005
[223] Beach & Bamford, 2016
[224] Luhmann & Hawkley, 2016
[225] Ibid.
[226] Elmer, van Tilburg, & Fokkema, 2018; Kim & Fredriksen-Goldsen, 2016; Kuyper & Fokkema, 2010; MetLife Mature Market Institute, 2010; National Seniors Council, 2014, 2017; SAGE, 2014; Syed et al., 2017

different values and expectations regarding the optimal amount of time that should be spent together.[227] LGBTQ+ seniors may be prone to isolation and loneliness because, compared to their heterosexual peers, they are more likely to be single, childless, and estranged from their families of origin.[228] For gay men, the internalization of shame can cause various difficulties in interpersonal relationships, including excessive self-monitoring; avoidant behaviour; trust issues; unrealistic relationship standards and expectations; and a preoccupation with physical appearance.[229] As they age, some older gay and bisexual men may feel invisible in a community that they perceive to be overly focused on youth and appearance.[230] Gender-nonconforming people may face additional discrimination from within the gay community.[231] These and other issues are discussed in more detail in reports from SPARC BC[232] and the National Seniors Council of Canada.[233]

Unrealistically high relationship standards and expectations are a risk factor for loneliness.

Factors affecting social perceptions and interactions

Some risk factors affect the way people perceive and interact with others, in turn shaping their subjective evaluations of relationships and, consequently, their subjective sense of isolation. Several of these factors may cause problems in the re-affiliation process described earlier on pages 29-30 (i.e., the natural process by which people re-connect after feeling alone). These factors include the preferred number of relationships and frequency of contact[234]; emphasis on relationship *quantity* over *quality*[235]; unrealistically high relationship standards and expectations (e.g., seeking a perfect "soul mate;" expecting one person to meet all of one's emotional needs; believing that a "true friend" would never hurt one's feelings or break a commitment)[236]; and social comparison processes (e.g., judging the adequacy of one's relationships in comparison to other people's relationships).[237]

Other factors affecting social perceptions and interactions include personality traits (e.g., introversion, neuroticism, disagreeableness, excessive shyness, rejection

[227] Ng & Northcott, 2015
[228] Brennan-Ing et al. 2014; Guasp, 2011; Institute of Medicine, 2011; MetLife Mature Market Institute, 2010; SAGE 2014; Wilson, Kortes-Miller, & Stinchombe, 2018
[229] Bereznai, 2006; Bergling, 2007; Downs, 2012; Elmer, 2018; Hobbes, 2017
[230] Bergling, 2004; Kooden & Flowers, 2000; Pope et al., 2007; Savage, 2018
[231] Bergling, 2001
[232] SPARC BC, 2017
[233] National Seniors Council, 2017
[234] de Jong Gierveld, 1987
[235] Lee & Ko, 2017
[236] Dykstra & Fokkema, 2007
[237] Copeland, 2018; Perlman & Peplau, 1981

sensitivity, suspiciousness, and boredom-proneness)[238]; poor past relationship experiences (e.g., experiences of rejection and bullying during childhood[239], leading possibly to rejection sensitivity[240]); insecure attachment history[241]; experiences of captivity[242]; elder abuse and neglect[243]; low self-worth; and pre-existing mental health or neurological conditions such as social anxiety[244], autism[245], cognitive impairment[246], and personality disorders (e.g., borderline[247] and schizoid[248]).

Attitudes and beliefs. As mentioned earlier, attitudes and beliefs also appear to be risk factors, including low relationship self-efficacy (i.e., lack of confidence in one's relationship abilities, irrespective of one's actual social skills); external locus of control (i.e., believing that relationships "just happen" and are mainly influenced by external factors beyond one's control); and negative attitudes about aging (e.g., believing that late life is a time of inevitable social decline and that it is not possible to expand one's social network).[249] Resilience and proactive coping is also an important factor: those who are lonely appear unable to cope with age-related losses and feel overwhelmed by them; in contrast, those who are not lonely (or who are able to manage their loneliness) appear to accept losses as a normal part of the aging process and take initiative to remain socially active[250], even if they need to force themselves to do so.[251]

---

[238] Dill & Anderson, 1999; Long & Martin, 2000; Mund & Neyer, 2016. Regarding boredom-proneness, this tendency may lead to inattention in social situations (Conroy et al., 2010). It may also lead to unrealistic expectations, such as expecting friends and family to be fun and exciting at all times.
[239] These effects may last well into later life (Nicolaisen & Thorsen, 2014).
[240] London, Downey, Bonica, & Paltin, 2007; Watson & Nesdale, 2012
[241] DiTommaso, Fizell, & Robinson, 2015; Mikulincer & Shaver, 2014
[242] E.g., veterans of combat: Stein & Tuval-Mashiach, 2015
[243] Dong et al., 2012; Heravi-Karimoii et al., 2011
[244] Lim, Rodebaugh, Zyphur, & Gleeson, 2016
[245] Mazurek, 2014. Autism-spectrum disorders are characterized by difficulties with social interaction, which can contribute to isolation and loneliness.
[246] Ayalon, Shiovitz-Ezra, & Roziner, 2016; Burholt, Windle, & Morgan, 2017; Zhong, Chen, Tu, & Conwell, 2017. As a risk factor for isolation/loneliness, cognitive impairment might lead to communication difficulties, distorted perceptions of relationships (and hence lower relationship satisfaction), discrimination, poor self-efficacy, fear of getting lost, and other problems that impact social interaction. Of course, as discussed earlier, cognitive impairment may additionally be an *outcome* of isolation and loneliness (Holwerda et al., 2014; Kuiper et al., 2015; Wilson et al., 2007; Zhong et al., 2017).
[247] Liebke et al., 2017
[248] Martens, 2010
[249] Beach & Bamford, 2016; DiTommasso et al., 2015; Fry & Debats, 2002; Newall et al., 2009, 2014; Pikhartova et al., 2016; Qualter et al., 2015; Vanhalst et al., 2015; Watson & Nesdale, 2012. Of note, a recent survey of British seniors found that nearly one-third believe feelings of loneliness are out of their control (Independent Age UK, 2016).
[250] Hauge & Kirkevold, 2012; Kirkevold et al., 2012
[251] Bergland et al., 2016

Genetics. Finally, genetic factors have been examined. Results from twin and adoption studies suggest that about 40% of the variation in loneliness can be attributed to genetic differences between individuals.[252] Two people may have objectively similar relationships in terms of quantity and quality, yet one may be less satisfied with those relationships simply due to hereditary differences. This may partly explain why lonely people—even those who are severely or chronically lonely—are often unable to cite any particular reason for their feelings; they just feel the way that they do.[253]

The specific mechanism(s) by which genes are linked to loneliness are not year clear. For example, there may be specific genes that influence individual differences in the need for social contact, the degree of social pain caused by perceived isolation, or certain personality traits like neuroticism and rejection sensitivity. Genes may also influence behavioural traits associated with loneliness, such as poor emotional regulation and hypersensitivity to social threat.

Genes influence both social isolation and loneliness isolation through several different mechanisms.

Interestingly, a recent study found that 40% of the variance in *objective social isolation* can also be attributed to genetic factors, and two-thirds of the genetic relationship between isolation and loneliness is explained by common genetic factors.[254] This suggests that the same genetic factors that predispose some lonely people to respond in a maladaptive way to their perceived isolation (e.g., distrustfulness, hypervigilance for social threat) may be the same factors that made them socially isolated in the first place.[255]

---

[252] Gao et al., 2017; Goosens et al., 2015

[253] As part of my dissertation, I have collected data from over 13,000 people in 75 countries and have found that around half of lonely people—even the most severely or chronically lonely—could cite no specific reason for their feelings. Similar findings are reported by Wilson & Moulton (2010).

[254] Matthews et al., 2016

[255] This finding raises the question why seemingly maladaptive genes have not disappeared from the gene pool through natural selection. According to Cacioppo, Hawley, and Correll (2013), over evolutionary time, populations likely benefited from individuals who exhibited a wide range of sensitivity to social disconnection.Given sufficient time, even chronically lonely people often form relationships and, through the process of assortative mating, their partners are likely to be those who are similarly sensitive to social disconnection. These individuals then produce offspring who carry genes predisposing to loneliness. While it is true that these genes increase the risk for poor health and mortality, these effects tend to become prominent only later in life, well after one's reproductive years; thus, the genes are able to spread in the population. The same arguments could be applied to social isolation, in light of new research showing that some non-human primates have a tendency to self-isolate over long periods of time (Brent, Ruiz-Lambides, & Platt, 2017; see also Bailey & Moore, 2018).

Gene-environment interactions are also possible; for example, low social support may have more impact on loneliness among people who carry variants of genes that increase their emotional sensitivity to this deficit.[256]

There is no single "loneliness" gene; multiple genes likely influence loneliness (and isolation, too).

Regardless of the specific genetic mechanisms at play, it is likely that loneliness is *polygenic*—influenced by variants of many genes, each with relatively small effects.[257] There is no single "loneliness gene." It is important to note, however, that while genes may affect loneliness (and likely isolation, too), this does not imply genetic determinism. Rather, genes may increase the *predisposition* to experience isolation and loneliness, but it is possible to learn to manage this predisposition, as will be discussed later in Recommendation #10.

Relational and Social Network Risk Factors

These risk factors relate to the structure and functioning of one's current social network. They include lack of a spousal confidant or other high-quality intimate relationship[258], but not necessarily a romantic one[259]; a small social network (if a larger one is desired); infrequent contact with family and friends; childlessness (or lack of contact with adult children); poor perceived social support; relationship conflict; and critical events or transitions like divorce, bereavement, relocation, job dismissal, retirement, losing a driver's license, and becoming a caregiver or care recipient.[260] These transitions are especially difficult if they are sudden and one is unprepared for them.[261]

Living alone. Living alone is a frequently cited risk factor, but it is not living alone *per se* that is the problem but, rather, other factors that tend to go hand-in-hand with it, including low income and being single, divorced, or widowed.[262] Those who live alone

---

[256] Goosens et al., 2015
[257] Gao et al., 2017
[258] "High-quality" is emphasized. Poor-quality relationships offer no protection against loneliness and can even increase it. See Ayalon et al., 2013; de Jong Gierveld et al., 2009; Dykstra & Fokkema, 2007; Fokkema & Naderi, 2013; Moorman, 2016. See also Rook, 1984b.
[259] Lack of a romantic partner is not necessarily a risk for isolation: single people are more likely than others to stay in touch with family and friends (Sarkisian & Gerstel, 2015). For loneliness, however, it is a risk factor (Luhmann & Hawkley, 2016) but likely only if a romantic partner is desired (DePaulo, 2018).
[260] Böger & Huxhold, 2018a; Cohen-Mansfield et al., 2016; Courtin & Knapp, 2017; Dahlberg et al., 2015; Dahlberg & McKee, 2014; de Jong Gierveld et al., 2016; Hawkley & Kocherginsky, 2017; Luhmann & Hawkley, 2016; National Seniors Council, 2014/17; Ong et al., 2016; Wister & Menec, 2018; Yang, 2018
[261] For example, retirement can cut people off not only from an important source of status and identity (Baker, 2017; Osborne, 2012), but also friendship. Those who have not taken steps to nurture friendships beyond the workplace may become isolated and lonely after retirement. This is especially the case for men, whose primary source of social contact outside the home tends to be the workplace (Baker, 2017).
[262] Luhmann & Hawkley, 2016; Perissinotto & Covinsky, 2014

but have an adequate income and satisfying social circle outside the home are not at greater risk for isolation or loneliness[263]; in fact, one study found that living alone may even have beneficial effects on relationship quality because, after controlling for all other sociodemographic risk factors, loneliness appeared to be *lower* among those who lived alone.[264] More research is needed to verify this finding.

Diversity of social ties. Although we tend to focus our time and energy nurturing strong social ties, weak ties are also beneficial because they are associated with increased well-being and sense of belonging.[265] Moreover, people with a mix of both strong *and* weak ties tend to be healthier, less prone to loneliness, and less likely to die early compared to those with strong or weak ties only.[266] Weak ties may be beneficial because they are less time-consuming, less conflictual, and less emotionally taxing than strong ties. They may help reduce the burden on primary relationships by providing companionship in different contexts (e.g., friends to go see a movie with, acquaintances to chat with at a gym class). They may also provide important sources of health-related support and information (e.g., referrals to good physicians).[267] Perhaps most importantly, weak ties may also open the door for the formation of strong ties (e.g., meeting a partner through a neighbour or acquaintance).

Although not yet tested empirically, age composition of social networks may also be influential; as mentioned in the community consultations for this project, older adults whose network is comprised mostly of same-age peers may find themselves alone as those friends pass away. It may thus be beneficial to have friends of different ages. Mixed-age/intergenerational programs could be particularly valuable in this regard.

Community Risk Factors

City living. In the popular press, city living is frequently cited as a cause of isolation and loneliness[268], but the empirical evidence on this issue is mixed. Some studies have found that urban dwellers are more isolated or lonely than those living in non-urban areas[269], whereas others have found the opposite pattern[270] or no differences at all.[271]

While it has been argued that cities areas are more transient, anonymous, and less socially integrated than less populous areas, it has also been argued that cities provide a multitude of opportunities to form strong and weak ties, both of which are important in

[263] DePaulo, 2018
[264] Luhmann & Hawkley, 2016
[265] Sandstrom & Dunn, 2014
[266] Cohen & Janicki-Deverts, 2009; Kauppi et al., 2017; van Tilburg, 1990
[267] Kauppi et al., 2017
[268] Andrews, 2017; Maguire Gillies, 2016; Laing, 2016
[269] Nyqvist et al., 2013; Scharf & de Jong Gierveld, 2008
[270] Drennan et al., 2008; Lasgaard et al., 2016; Savikko et al., 2005; Senior, 2008
[271] de Jong Gierveld & Fokkema, 1998; Havens et al., 2004

preventing isolation and loneliness.[272] It is true that as people densify, they may feel somewhat overwhelmed by social stimulation and avoid talking to strangers or retreat into solitude to "recharge their batteries," but this does not necessarily mean that city dwellers curtail their social networks. More research is needed to settle this issue and also to explore whether or not isolation and loneliness experienced by city dwellers is *qualitatively* distinct from that experienced by people living in less populous areas.[273]

Whether or not city living is in general is associated with loneliness, it is clear that not all cities are conducive to social interaction.

Even if it turns out that city living is associated with lower rates of isolation and loneliness, it is obvious that not all cities and neighbourhoods are conducive to social connection. Research indicates that low perceived quality of residential neighbourhoods is associated with increased loneliness.[274] Inadequate or inhospitable public spaces, poor housing conditions, real and perceived crime, and poor transit are all associated with increased isolation and loneliness.[275] The latter is especially important for those who do not drive.[276] The possible roles of high neighbourhood turnover, gentrification. and displacement of long-term residents have also been discussed.[277] These and other features of the built environment were cited frequently in the community consultations as well as older adults in other focus groups.[278]

Renting and living in high-rise buildings. In Vancouver, much debate has ensued about the role that renting and high-rise living may play in increasing the risk for isolation and loneliness. The 2012 Vancouver Foundation report found that 40% of high-rise dwellers reported feeling alone and being less neighbourly compared to 22% of people living in a detached home.[279] The report also found that renters reported greater loneliness than homeowners. It is not known, however, if there are other variables that

[272] Klineberg, 2012b; Senior, 2008
[273] It is possible that lonely people living in less populated areas have some hope that their loneliness may subside if only they can expand their social network (e.g., move to a new city). For those already living in cities, however, the fact that they feel lonely even while surrounded by others may instill a sense of hopelessness (ACEVO, 2015).
[274] Scharf & de Jong Gierveld, 2008. It is also possible, of course, that loneliness also leads to negative perceptions of neighbourhood quality (Matthews et al., 2019).
[275] Ferreira-Alves et al., 2014; Kearns, Whitley, Tannahill, & Ellaway, 2015; Kelly, 2012; Lasgaard et al., 2016; National Seniors Council, 2017; Portacolone, 2018; Scharf, Phillipson, Smith, & Kingston, 2002
[276] Weijs-Perree, Berg, Arentze, & Kemperman, 2015
[277] Laing, 2016; Scharf, 2011. As mentioned during the community consultations, gentrification can rupture existing neighbourhood ties as lower-income people are forced to move due to the increasing cost of living. Moreover, people who remain in a gentrifying neighborhood may feel like they have little in common with their new neighbours and, therefore, that they no longer belong.
[278] E.g., Cohen-Mansfield et al., 2016
[279] Vancouver Foundation, 2012b

might account for these findings, such as lower income or being in a transitional phase of life. For example, it may be that poorer people, those starting a new career, or those not intending to put down roots in a particular neighbourhood are not only more likely to be lonely, but also more likely to be renting and living in high-rise apartment buildings.

Although one study found that renters are lonelier than homeowners even after controlling for other sociodemographic variables[280], similar studies have found no association between high-rise living and loneliness.[281] Perhaps an association does exist, but there is surprisingly little quantitative data on this topic.[282] Qualitative data paints a different picture, however. For example, some authors have observed that typical high-rises are not conducive to social interaction, but ground-oriented ones are, such as those built on top of a townhouse podium where residents are more likely to linger and socialize.[283] These and other types of design elements that facilitate social interaction[284] are discussed in recommendations #11-13.

Housing affordability and security. These have also been cited as possible risk factors for isolation and loneliness.[285] Participants in the community consultations indicated that high rents and the fear of eviction may push many seniors out of their homes, forcing them to leave behind long-established relationships. Those who can still afford their rent may be left with little money to spend on social activities. This is echoed by recent findings from the Vancouver Foundation: nearly one-third of respondents (of all ages) reported that a close friend or family member left their neighbourhood due to housing or other affordability issues.[286] Moreover, nearly a quarter of respondents cited financial difficulties as a barrier to social participation. These numbers were even higher among younger adults, suggesting that affordability is not a barrier exclusive to seniors.

Aging in place. An unexpected risk factor pertains to "aging in place." Data suggest that there is a higher prevalence of social isolation and loneliness among seniors who remain in neighbourhoods with a high proportion of families.[287] These appear to be seniors who have aged in place and found themselves alone after their partner passed away and their friends have moved into residential care or other areas of the city. They may feel estranged from the new people who gradually move into their neighbourhood and with whom they may have less in common in terms of class, age, or ethnicity.

Surprisingly, aging in place could be a risk factor for isolation and loneliness.

[280] Lasgaard et al., 2016
[281] de Jong Gierveld, 1989; Kearns et al., 2015
[282] Gifford, 2007
[283] Montgomery, 2013
[284] Kelly, 2012; Tavakoli, 2017
[285] National Seniors Council, 2014
[286] Vancouver Foundation, 2017
[287] Fischer, 2008, cited in Senior, 2008

Societal Risk Factors

Compared to the previous risk factors, there is less research about societal risk factors. Below is an overview of these factors, all of which should be studied in more depth.

Broad societal factors. Country-level economic deprivation, income inequality, and inadequate social welfare systems are all associated with isolation and loneliness to some degree.[288] The contentious issue of social media has also been raised[289], as have various wide-ranging cultural changes: rising individualism; secularization; increasing divorce rates; geographic mobility; materialism; emphasis on careers over relationships; increasingly hectic lives; more part-time and temporary jobs; online dating; disinterest in the wisdom and experiences of previous generations; and a cultural preoccupation with privacy.[290] The idealization of romantic relationships and the pervasive societal pressure to be partnered have also been cited. [291]

Contrary to popular conceptions, people from collectivistic cultures are more prone to loneliness than those from individualistic cultures.

Cultural norms and values. Individuals from collectivistic cultures are actually more prone to loneliness than those from individualistic cultures because they have a stronger preference for social contact and, therefore, experience greater distress when their needs are not met.[292] Culture may also affect attitudes regarding remarriage: not all

[288] de Jong Gierveld & Tesch-Römer, 2012; Fokkema et al., 2012; Hansen & Slagsvold, 2015
[289] Konnikova, 2013; Marche, 2012; Turkle, 2011
[290] Hobbes, 2017; Olds & Schwartz, 2009; Pieters, 2013; Stanley, et al., 2010; Van der Geest, 2004; Vancouver Foundation, 2017.
[291] Bereznai, 2006; DePaulo, 2006. Some also argue that loneliness itself could increase idealization of relationships: "If one's living in a culture where a lot of people are lonely, there's going to be a tremendous idealization of relationships. People are going to want more from each other than they can give. It's going to produce a compensatory dream of unbelievable ecstatic intimacy" (Phillips, 2018, cited in Fergusson, 2018).
[292] Dykstra, 2009; Fokkema, de Jong Gierveld, & Dysktra, 2012; Hansen & Slagsvold, 2015; Lykes & Kemmelmeier, 2014; van Staden & Coetzee, 2010. Cultural norms also appear to influence the relationship between loneliness and living alone: older adults who live alone in Northern European countries are less lonely than older adults who live alone in southern European countries, presumably because the former are living in accord with their cultural expectations whereas the latter are not (Imamoglu et al., 1993; Jylha & Jokela, 1990). Also of note, in collectivistic cultures, loneliness is more strongly associated with kin relationships, whereas in individualistic cultures, loneliness is more strongly associated with non-kin relationships (Lykes & Kemmelmeier, 2014). There is also a cross-cultural difference in the relationship between social contact frequency and mortality, with a stronger relationship between these variables in continental Europe vs. North America (Shor & Roelfs, 2015).

cultures accept remarriage after the death of a partner.[293] Attitudes towards older adults are another possible factor: those who report experiencing ageism are at increased risk for loneliness[294], although causation is difficult to determine (i.e., ageism might cause isolation/loneliness, but lonely/isolated people might also be more prone to perceiving ageism). As mentioned during the community consultations, ageism can also become internalized, leading to shame, low self-worth, and, consequently, reluctance to seek help for isolation or loneliness.

Services and Interventions

While we know a great deal about the *causes* of chronic isolation and loneliness, we know much less about strategies for *preventing or reducing* them. Considering the various risk factors described earlier, it appears that there are several possible avenues for intervention and/or prevention:

1. Improving the quantity of relationships
2. Improving the perceived *quality* of existing relationships (e.g., resolving relationship conflict)
3. Changing unrealistic relationship standards and expectations (e.g., expecting one person must meet all of one's emotional needs; expecting that a friend will "always be there" and never hurt one's feelings or break a commitment)
4. Changing maladaptive social cognition (e.g., reducing hyper-sensitivity to social threat, learned helplessness, and external locus of control)
5. Self-acceptance and tolerance of isolation and loneliness (e.g., developing more emotional comfort with some degree of loneliness or finding ways to meet some emotional needs on one's own)

Given the biological underpinnings of loneliness, some have also surmised about the potential utility of adjunctive pharmacological interventions, particularly if targeted at the behavioural effects of chronic, maladaptive loneliness (e.g., fear, anxious withdrawal).[295] While very intriguing, discussion of these interventions is beyond the scope of this report.

[293] Heravi-Karimoii et al., 2010
[294] Sutin et al., 2015
[295] Cacioppo, Grippo, London, Goossens, & Cacioppo, 2015

Various interventions have been attempted with these avenues in mind, a detailed description of which can be found elsewhere.[296] In general, however, the evidence base for most interventions is not particularly strong.[297] Most interventions have not been rigorously evaluated and, where they have, sample sizes have been small and replication studies rare. In many programs, success is judged mainly by measures of process, such as participant satisfaction and number of people participating.[298] Randomized-control trials are rarely used, making it difficult to determine if any changes in loneliness or isolation are due to the intervention itself versus other factors like self-selection bias, natural improvement over time, expectancy effects, Hawthorne effects, or regression to the mean.[299] Moreover, it is difficult to make generalizations from these studies because of variation in selected outcomes, choice of measurement instruments, and composition of treatment groups (e.g., many interventions appear to target "easy" groups: those who are not at especially high risk of isolation or loneliness in the first place because they are already socially involved or inclined to access services).

Meta-Analysis of Interventions

Of the few rigorous meta-analyses[300] of interventions for isolation and loneliness, the most notable focused on loneliness.[301] This study divided interventions into four categories, generally in line with the five categories described on the previous page:

1. Programs that provide opportunities for *social contact* (e.g., social activities, clubs, senior centre programs)
2. Programs to *enhance social support* (i.e., offering regular contact, care, and companionship; e.g., home visiting, telephone befriending, peer support)
3. Programs to improve *social skills* (e.g., friendship skills training)
4. Programs involving social-cognitive strategies and coping skills (e.g., reducing hypervigilance for social threat and irrational thoughts; reframing perceptions of loneliness; increasing relationship self-efficacy; regulating emotions; applying these skills to improve the quality of existing relationships)

---

[296] Campaign to End Loneliness, 2011, 2012, 2015b; Jopling, 2015; Miller, Simpson, Buckle, & Berger, 2015; SPARC BC, 2017; Ubido, 2014

[297] Cattan, White, & Learmouth, 2005; Dickens, Richards, Greaves, & Campbell, 2011; Findlay, 2003; Gardiner, Geldenhuys, & Gott, 2016; Masi et al., 2011; Retrum, 2018; Stojanovic et al., 2017

[298] Valtorta & Hanratty, 2012

[299] Regression to the mean: When a variable is extreme on its first measure, it tends to be closer to the average level on subsequent measurements. In non-randomized studies, this statistical reduction may be mistakenly interpreted as evidence for the effectiveness of an intervention (Linden, 2013). See glossary at beginning of report for other definitions.

[300] A meta-analysis pools the results of several individual studies in order to increase the overall sample size and statistical power (the ability of a statistical test to detect a significant effect where one exists).

[301] Masi et al., 2011

Social-cognitive interventions appear to be the most effective for reducing chronic loneliness.

Of the interventions included in this meta-analysis, most fell into the first three categories, perhaps because they seem most intuitive based on our common sense understanding of the causes of loneliness. However, when restricting the analysis to those few studies that used a randomized-control design, the authors found that the social-cognitive programs had the largest positive effect, whereas the others had much smaller effects or none at all.

This is not surprising given the role of social-cognitive factors as both causes and consequences of loneliness, especially chronic loneliness. Merely providing social contact is ineffective if the lonely person's unrealistic relationship expectations, hypervigilance for social threats, and self-protective behaviours continue to interfere with his or her social interactions. In fact, such a strategy may be counterproductive: the lonely person may feel even lonelier if unable to connect successfully with people who are offering their companionship.[302] Even worse may be putting lonely people together: their loneliness may increase as they mutually reinforce one another's maladaptive social perceptions.[303] And of course, providing social contact is insufficient if it is superficial.

Enhancing social support may offer some benefit, but as discussed earlier, people can receive plenty of social support (e.g., in a residential care facility) yet still feel lonely if the support is perceived as one-sided, intrusive, conditional, or provided out of obligation rather than genuine interest. Social skills training is also limited in effectiveness; except in cases where there are marked social skill deficits, improving social skills does not seem to be beneficial because lonely people generally have adequate social skills; they just appear to be unable (or unwilling) to draw on these skills when they are feeling lonely.[304]

Some have criticized this meta-analysis on the grounds that it did not distinguish between different groups of lonely people.[305] Social contact and social support programs may, in fact, be useful for seniors whose loneliness is caused primarily by lack of social contact (e.g., homebound seniors) but whose social perceptions have not yet been negatively impacted. They might also be useful to prevent transient loneliness from becoming chronic among people who have certain background risk factors like mental health problems or who are having trouble adjusting to difficult transitions like divorce, bereavement, relocation, job dismissal, or retirement. There is currently little

[302] ACEVO, 2015
[303] Hellman, 2011, cited in Campaign to End Loneliness, 2011, p. 15
[304] Cacioppo et al., 2006a; Knowles, Lucas, Baumeister, & Gardner, 2015; White, 2010
[305] Qualter et al., 2015

research on these individuals and more is needed. In general, however, people are quite resilient: most cases of transient loneliness, including those caused by life transitions, resolve on their own or with some support from friends and family. These cases do not require active intervention.[306] The natural recovery from transient loneliness likely explains why many interventions have a much smaller effect size (or no effect at all) when compared against a control group.

Common Elements of Successful Interventions

Effective interventions appear have a few common characteristics: they are developed using a sound theoretical framework; they allow older adults to play an active role in the intervention (e.g., in implementation and planning); they are adaptable to the needs of specific clients; and they involve productive engagement rather than passive activities (i.e., "doing" as opposed to merely watching or listening).[307]

It should be noted, however, that the people who participate in interventions are not necessarily representative of the general population of seniors: they may be people who are already involved in the community or who are socially gregarious by disposition (as are, perhaps, the service providers themselves). Indeed, several participants in the community consultations indicated that service providers may be overlooking a large group of isolated and lonely seniors: those who desire social contact but who are introverted and prefer lower-key social activities (e.g., one-to-one interactions). Providers are also likely missing those whose situation is the most severe: seniors who cannot leave their home or who have become fearful of social contact because of changes in social cognition.[308]

Programs tend to reach people whose isolation or loneliness is not severe or chronic; they are not reaching the more vulnerable people who would benefit most from the services.

Contrary to previous reviews, a more recent review by Gardiner and colleagues did not find any evidence for the superiority of group activities[309]; indeed, they found that "solitary" social activities like Skyping, joining online and teleconference communities[310], or participating in an animal visiting program may be beneficial for seniors who are introverted or

[306] de Jong Gierveld, Fokkema, & van Tilburg, 2011; Fokkema, personal communication, December, 2017
[307] Dickens et al., 2011; Gardiner et al., 2016
[308] Retrum, 2018
[309] Gardiner et al., 2016. This was also the finding in the meta-analysis by Masi and colleagues (2011).
[310] E.g., "Senior Centre Without Walls" in Winnipeg: Newall & Menec, 2015

homebound.[311] These reviews, however, did not consider the difference between transient versus chronic loneliness. It may be the case that large group activities are not suitable for seniors whose chronic isolation or loneliness has made them socially anxious. For these individuals, the advice of de Jong Gierveld may be most useful:

> "Don't advise someone to join a club. Someone who is socially isolated will feel lost once thrown into a group. It is better to sit down with someone and think of an activity where the person himself can play a meaningful role in other people's lives. "[312]

The views of isolated and lonely people themselves have also provided valuable insights. In a recent qualitative study, some lonely seniors (as identified using the de Jong Gierveld Loneliness Scale) indicated that loneliness is a private problem that they preferred to manage on their own.[313] They expressed reluctance to participate in programs for isolation or loneliness (especially those advertised as such), citing embarrassment and the perception that they are for desperate "old people" who cannot make friends.[314] They did say, however, that they might try the programs if they were quite old and had no other options.[315]

Not surprisingly, people are unlikely to participate in a program that is advertised as being for isolated or lonely people.

They also expressed skepticism towards befriending programs, feeling that they would be too impersonal. They indicated that, if they did participate in a program, it would need to involve a group activity based on personally meaningful[316], shared interests rather than just a program focused on socializing for its own sake.[317] Of those who had

---

[311] Newall & Menec, 2015
[312] de Jong Gierveld, 2007
[313] Kharicha et al., 2017
[314] See also Bamford & Beach, 2016. Also note, many isolated/lonely people do not see themselves as such (Bernal, 2019).
[315] This perception relates to a broader debate about the preference for, and appropriateness of, mixed vs. age-segregated programs (e.g., Hannon, 2015). In the absence of any empirical evidence on this issue (e.g., which groups of seniors prefer or would benefit most from which type of program), it would seem appropriate to offer seniors a choice between both types of programs.
[316] As stated in the community consultations, activities that are not personally meaningful do not promote the kind of sustained engagement that can encourage person to remain involved in a group. This can be very important as it can take some time for new relationships to develop. Engaging, meaningful activities can help people remain involved and reduce the likelihood of premature dropout (Olds, Schwartz, & Webster, 1996), which is not uncommon among chronically isolated or lonely people given their tendency to expect immediate results (Cacioppo & Patrick, 2008). Moreover, even if no new relationships emerge, meaningful activities can help people to persevere through loneliness (e.g., by functioning as a distraction) or can add meaning to one's life and therefore reduce existential loneliness (Ericksson, 1992).
[317] See also Bergland et al., 2016

previously participated in programs, some cited dissatisfaction with impatient staff and power dynamics within groups. Participants in the community consultations echoed these concerns, adding that some programs may be age-inappropriate, staff may unknowingly patronize or infantilize older clients (e.g., using "elderspeak"[318]), and clients may sometimes feel like they are merely passive recipients of services rather than active participants.

In another qualitative study, lonely individuals complained that many programs are poorly advertised and that they were unaware of their existence.[319] They also complained that programs were not close enough to their homes; were "one-offs" with no continuity and not enough time to form relationships; and were too rigid and formal. On the positive side, they expressed interest in programs that instill a sense of confidence and personal identity.[320] As suggested in the community consultations, an example would be an intergenerational program in which older adults teach skills to younger adults (e.g., cooking, woodworking, even political advocacy).This leads to a broader point: we must think beyond the mere provision of programs and services, as many isolated and lonely people dislike *receiving* services; they would much rather do something useful for others so that they can feel valued and independent, not pitied and infantilized.[321]

Most interventions appear to target social loneliness to the exclusion of intimate/emotional loneliness, which may partly explain their lack of effectiveness.

One important issue that is cited by both researchers and lonely people themselves is the need to distinguish between social and emotional/intimate loneliness.[322] Different types of relationships are not necessarily interchangeable: focusing on relationships with friends and a broader social network will not necessarily alleviate emotional/intimate loneliness, and focusing on a romantic partner will not necessarily alleviate social loneliness.[323] To the extent that programs address loneliness at all—most address isolation only—they appear to target social loneliness to the exclusion of emotional/intimate loneliness, even though both are important for health and well-being.[324] This may partly explain their lack of effectiveness.

[318] Language resembling babytalk: Brenoff, 2017; Caporael, 1981; Kemper, 1994; Leland, 2008; Simpson, 2002; Williams, Kemper, & Hummert, 2003
[319] Kantar Public, 2016
[320] See also Wong, 2015
[321] Bernal, 2019; Hauge & Kirkevold, 2012; Wong, 2015
[322] BBC, "The Age of Loneliness," 2016a; de Jong Gierveld, Fokkema, & van Tilburg, 2011
[323] Olds & Schwartz, 2009; Weiss, 1973; White, 2010
[324] Weiss, 1973

Complex, Multidimensional Interventions

In addition to individual services and programs, a few attempts have meet made to design and evaluate complex, multidimensional programs to reduce isolation and loneliness at the broader population level. For example, a program developed in the Netherlands included a mass media education campaign about loneliness, information sessions, psychosocial group courses, neighbourhood social activities, and training of service providers. An initial evaluation suggested that there were improvements in knowledge about loneliness after the intervention, but no effect on social support or feelings of loneliness.[325] More time, however, may be needed to detect changes in these outcomes at the population level and to determine whether parts of the program need to be adjusted.

Responding to Isolation and Loneliness: Whose Problems Are They?

Some people feel that social isolation and loneliness are private, personal matters that are nobody else's business. Indeed, many isolated and lonely people feel this way, but many others do not. [326] According to a recent British poll, 81% of people believe that everyone has a duty and can play a role in helping people in their local communities who might be experiencing isolation or loneliness.[327] The Campaign to End Loneliness concurs:

> Emotional states cannot be altered by law. You cannot befriend by diktat. There are no Departments of Loneliness, nor should there be.[328] However, loneliness is not a purely private matter. A problem which is often about a lack of connections needs a connected response. We should all play our part.[329]

As discussed earlier, isolation and loneliness—particularly when chronic—can have serious implications for physical and mental health. This can impact the healthcare system, which affects everyone. Isolation and loneliness can also affect the social fabric. For example, as seniors become more isolated, society no longer benefits from

[325] Honigh-de Vlaming et al., 2013
[326] E.g., Kharicha et al., 2017
[327] Kantar Public, 2016
[328] The United Kingdom recently appointed a "Minister of Loneliness" to help tackle the problems of isolation and loneliness across government lines (United Kingdom Government, 2018). While this may be a welcome development in several respects, some have expressed skepticism about the degree to which emotional problems can be remedied by government intervention (CBC News, January 17, 2018; Givetash, 2018a).
[329] Campaign to End Loneliness, 2011, p. 15

their valuable contributions (e.g., time, expertise, wisdom), possibly leading to disruption of community cohesion[330] and reinforcement of ageist stereotypes that older people are useless.[331] Moreover, as loneliness is associated with various forms of social capital (e.g., mutual trust, participation in social organizations, and sense of neighbourhood belonging[332]), it is possible that loneliness itself could have negative effects on community cohesion (and, likely, vice versa). Compounding these problems is the tendency for loneliness to spread through social networks.[333] This is why everyone, from individuals, to healthcare providers, to seniors' centres and businesses should play a role to prevent or minimize (chronic) isolation and loneliness.[334] The next section offers some potentially practical suggestions how everyone can get involved.

[330] Hortunalnus, Machielse, & Meeuwesen, 2006
[331] Falletta & Dannefer, 2014
[332] Nyqvist, Victor, Forsman, & Cattan, 2016
[333] Cacioppo, Fowler, & Christakis, 2009; Simon & Walker, 2018
[334] Kantar Public, 2016; Kadawaki & Cohen, 2017

Recommendations for Responding to Social Isolation and Loneliness Among Seniors

Development of the Recommendations

The recommendations in this report were based on the foregoing literature review as well as a series of four community consultations with over 200 local service providers. Participants were of diverse backgrounds and included representation of visible minorities, persons with disabilities, Indigenous people, and those from the LGBTQ+ communities. The consultations, which were organized by the Social Policy and Research Council of BC, were held at different locations throughout the City and at various times in order to attract a variety of participants. Venues included the Vancouver Public Library, Sunset Community Centre, and Vancouver Aboriginal Friendship Centre.

At each event, participants broke out into small groups to have conversations based on five key questions as suggested by the SILAS collaborative:

1. What do we know about seniors who are socially isolated or lonely?
2. How do we identify and reach out to socially isolated or lonely seniors?
3. How can we help link socially isolated or lonely seniors to services that will support them?
4. How do we address the barriers that hinder seniors from getting the support they need to prevent/overcome social isolation or loneliness?
5. What can we do to raise public awareness of social isolation and loneliness among both seniors and the general population?

A list of the most frequent responses from the community consultations is provided in Appendix F. They will not be repeated here, but some common themes emerged repeatedly across all consultations. Among these were the critical need for co-ordination, centralization, and sharing of information and resources; the use of non-traditional frontline workers to reach isolated and lonely seniors (e.g., police, firefighters, postal carriers, building managers); the need to address communication barriers relating to language, literacy, and technology; the value of inter-generational social connections; and the importance of education about social isolation and loneliness.

The recommendations in this report were informed by these insights and were also guided by four broad recommendations from the National Seniors' Council of Canada:

1. Build the collective capacity of organizations to address social isolation and loneliness through social innovation.
2. Promote improved access to information, services, and programs for seniors.
3. Raise public awareness of social isolation and loneliness among seniors.
4. Support research to better understand isolation and loneliness among seniors.

For ease of reference, the recommendations are organized into six categories:

1. Identification of socially isolated or lonely seniors
2. Outreach to socially isolated or lonely seniors
3. Innovative services/interventions to address social isolation and loneliness
4. Solutions to barriers that increase the risk for social isolation and loneliness
5. Public education
6. Improved research, measurement, and evaluation regarding the prevalence, causes, and consequences of social isolation and loneliness, as well as possible interventions and preventative strategies

Recognizing that reducing and preventing chronic isolation and loneliness requires a multi-pronged, coordinated approach at many levels, the recommendations in each category are further divided by the sector(s) to which they may be most applicable: local government, not-for-profit organizations (namely service providers), and individuals/caregivers. In some instances, recommendations are also given for the academic and business communities. Each recommendation is followed by specific examples and/or tips for implementation. In addition, a timeframe for each recommendation is offered, as well as suggested lead organizations and partners. Additional suggestions are provided in Appendices C-E.

This is not an exhaustive list of recommendations; for a wider range of recommendations, the reader is invited to consult reports by the National Seniors Council as well as the Campaign to End Loneliness in the UK.[335] The current report focuses on recommendations that are unique; that are informed by academic theory and empirical research; that were suggested frequently in the community consultations; and that are not currently in common practice in the City of Vancouver. Moreover, the recommendations were chosen as a means of informing/refreshing existing City of

[335] www.campaigntoendloneliness.org

Vancouver policies, including the Age-Friendly Action Plan, the Healthy City Strategy, and the Social Infrastructure Plan.

It is important to note that most of the programming and research regarding social isolation and loneliness focuses on intervention—and without much regard to the evolutionary roots of these issues and how they can interfere with social cognition and behaviour. Unfortunately, virtually no research or programming exists relating to prevention.[336] Given how difficult it can be to alleviate chronic isolation and loneliness, as well as the likelihood that prevention is probably more cost-effective in the long-term than intervention[337], this report will also focus on three levels of prevention[338]:

1. *Primary prevention*: reducing the likelihood that people become isolated or lonely in the first place. This may involve taking steps early in life, such as encouraging young people to build a solid social support network; promoting a safe environment in the classroom and on the playground; examining relationship expectations; and learning emotional self-regulation and other coping skills to prevent transient loneliness from spiraling into something more serious. Multidimensional approaches are ideal for this level of prevention. It should be noted that the complete prevention or eradication of isolation and loneliness is not a reasonable goal. Loneliness, in particular, is a critical human emotion: without the capacity to experience it to reasonable degree, people are less motivated to form and preserve social bonds.

Loneliness is a natural human emotion; trying to eradicate it completely is not a reasonable goal.

2. *Secondary prevention:* intervening in early stages of isolation and loneliness before they become severe or chronic. This may be especially important during critical life events and transitions, such as relocation, divorce, job dismissal, retirement, or bereavement, and for those who do not have a broader social network that can provide support during these times.

3. *Tertiary prevention*: minimizing the negative impact of severe or chronic isolation and loneliness when they have already occurred or when there is no immediate solution to these problems. This may involve psychological self-care and efforts to improve physical and mental health more generally.

[336] National Seniors Council, 2014
[337] See de Jong Gierveld & Fokkema, 2015; Hawton et al., 2011
[338] Valtorta & Hanratty, 2012

Because this report was written for, and funded by, the City of Vancouver and Vancouver Coastal Health, the proposed recommendations are focused at the local rather than provincial or national levels. Although broad societal factors like economic deprivation, income inequality, and inadequate social welfare systems likely play a role in isolation and loneliness, these problems are beyond the scope of this report.

Finally, it is important to maintain realistic expectations when considering these recommendations. There is no panacea—no ideal social activity or program—that will "cure" isolation or loneliness, especially given the different forms they can take and the multiplicity of risk factors. This is especially the case with chronic loneliness, which may be caused by long-standing dispositional factors and which may be stubbornly resistant to change given their impact on social cognition. The stigma of isolation and loneliness, coupled with the perception that these are private matters that many individuals prefer to manage on their own, are additional complicating factors. Finally, it is important to remember that not all problems can be solved, particularly for older people who have lost their spouse and lifelong friends; filling the void left by these losses can be very difficult, if not impossible.

For ease of reference, the following is a list of the 23 recommendations in this report. This should be considered a "menu" of strategies that can be selected in light of the unique needs and resource capacities of individual municipalities, service providers, and others interested in tackling isolation and loneliness.

Category	Sector/Level	Recommendation
Identification	Government	1. Harness open-source data to identify areas where residents are at increased risk for social isolation or loneliness, or are already experiencing these problems.
	Government	2. Capitalize on the existing network of trusted service providers, including first responders, to identify those at risk for social isolation or loneliness.
	Not-for-Profit; Individuals	3. Create "community teams" and capitalize on "local intelligence" to identify socially isolated or lonely seniors.
	Not-for-Profit	4. Provide training to service providers and others to identify socially isolated or lonely seniors.

Category	Sector/Level	Recommendation
Outreach	Government	5. Streamline referrals by creating a “first-contact” scheme.
	Not-for-Profit	6. Incorporate elements of “supported access” into programs.
	Not-for-Profit; Individuals	7. Expand the City’s *Hey Neighbour!* program in multi-unit residential buildings and consider implementation in single-dwelling neighbourhoods.
Services and Interventions	Academic	8. Create a central database of empirically validated interventions (or promising interventions) and host an annual or semi-annual information summit, bringing together academics, social service providers, and interested members of the general public to discuss best practices and explore partnerships.
	Not-for-Profit	9. *Audit* your organization’s policies and programs to determine the degree to which they currently address social isolation and loneliness.
	Not-for-Profit	10. *Optimize* your organization’s programs to address social isolation and loneliness, and consider including a social-cognitive element where appropriate.
Barrier Solutions	Government	11. Improve safety and walkability of streets and neighbourhoods.
	Government	12. Improve the attractiveness, accessibility, and safety of local parks and other green spaces.
	Government	13. Encourage the inclusion of “sociable design” features in residential buildings.
	Government	14. Enhance transit options and the transit experience for seniors.

Category	Sector/Level	Recommendation
	Government	15. Prevent social isolation and loneliness among ethnic minority seniors by protecting ethnic neighbourhoods; ensuring that local services are culturally appropriate; providing relevant information about government and social programs in many languages; and facilitating intergenerational living arrangements.
	Not-for-Profit; Individuals	16. Empower seniors and their families to use technology, including online social networking.
	Business	17. Work with the business community to help address social isolation and loneliness in their establishments and in their neighbourhoods.
Public Education	Government; Individuals	18. Launch a public education campaign about social isolation and loneliness, including a "one-stop shop" website for information and resources about these issues.
	Academic	19. Incorporate information about social isolation and loneliness into educational curricula for students, service providers, and clients.
Research, Measurement, Evaluation	Government	20. Improve the quantity and quality of data on the prevalence of social isolation and loneliness.
	Not-for-Profit	21. Improve the quality of program evaluation.
	Academic	22. Improve the quality of basic research on the risk factors, trajectories, and consequences of isolation and loneliness, and develop innovative, research-based interventions.
Ongoing Monitoring	Government	23. Assign oversight to the Seniors' Advisory Committee to monitor the City's ongoing implementation of strategies based on this report.

Note: These recommendations should be read in the context of the literature review.

Identification

By definition, isolated people are difficult to identify.[339] Lonely people are also difficult to identify because they often have no readily observable characteristics that distinguish them from other people.[340] As one researcher writes, "The portrait of a lonely person is very difficult to paint because what is really important is what is in your head."[341] Indeed, loneliness is often under-recognized even by close friends and family, especially when the lonely person is not socially isolated.[342] Stigma, along with the self-protective tendency for many chronically isolated and lonely people to withdraw even further from social interaction, reduces the likelihood that they will make themselves known to others. There are, nevertheless, some potentially innovative ways to identify those who may be suffering from, or may be at future risk for, chronic isolation or loneliness. These approaches, inspired by the Campaign to End Loneliness in the UK, involve data analysis and the use of various community "gatekeepers."

Sector: Government

Recommendation 1: Harness open-source data to identify areas where residents are at increased risk for social isolation or loneliness, or are already experiencing these problems.

Time Frame: Medium-term

Suggested Lead: City of Vancouver

Suggested Partners: SFU Department of Gerontology; SFU & UBC Department of Geography; SFU City Program

Following the example of Age UK, use open-source data to create dynamic "heat maps"[343] of isolation and loneliness "hot-spots" based on direct survey results as well as a combined index[344] of known or suspected risk factors, including the following:

---

[339] Goodman, Adams, & Swift, 2015

[340] Lonely people are no less attractive, popular, or intelligent than non-lonely people (Cacioppo & Hawkley, 2003; Vitkus & Horowitz, 1987). Moreover, lonely people may behave in ways that suggest to others they do not desire social contact, even though they desperately do. For example, they may avoid talking to others or reject friendly overtures (Cacioppo & Hawkley, 2005).

[341] Segrin, 2010, cited in Everett-Haynes, 2010

[342] Lee & Ko, 2017

[343] https://www.ageuk.org.uk/professional-resources-home/research/loneliness/loneliness-maps/

[344] For examples of an index, see Burns & Lucy, 2018; Lucy & Burns, 2017

- age (especially 75+)
- marital status (being widowed, divorced, or separated, especially recently)
- household size and composition (e.g., living alone, but note the caveat regarding this risk factor as per the literature review)
- constricted social network
- few peers living in the neighbourhood
- living in a high-rise building vs. detached home
- renting vs. owning your home
- low income and lower educational attainment
- ethnic minority or immigrant status
- language difficulties
- no driver's license or vehicle
- poor self-reported health
- receiving or providing care
- low neighbourhood density
- high neighbourhood turnover
- high number of marginalized people in the neighbourhood (e.g., people with substance abuse issues, LGBTQ+ people, sex trade workers, refugees, homeless people)
- social problems in the neighbourhood (e.g., crime)

It may be beneficial to use these data to identify the prevalence of different combinations of isolated and lonely people (e.g., isolated and lonely; lonely but not isolated), given the potentially different needs of these various groups (see. p. 24).

A variety of data sources could be used to construct the heat maps:

- Statistics Canada data (e.g., latest Census, General Social Survey, Canadian Community Health Survey)
- Canadian Longitudinal Study on Aging
- "My Health, My Community" surveys from Vancouver Coastal Health
- "Connections and Engagement" surveys from the Vancouver Foundation
- local crime/police statistics
- local fire department statistics

It may also be profitable to explore proprietary data sources such as Google searches (e.g., how often people in certain areas look for topics related to isolation or loneliness) or data from GPS-enabled apps such as Mappiness[345], which uses smartphones to track how aspects of the environment (e.g., noise, access to green spaces) affect residents' well-being.

[345] http://www.mappiness.org.uk/

These heat maps could be overlaid with City of Vancouver data on the location of social assets (e.g., seniors' centres, neighbourhood houses, community centres) and physical infrastructure (e.g., public washrooms, bus stops, parks) to determine areas where there are insufficient assets or where existing assets could be better utilized to address the needs of high-risk seniors. Data on social assets in particular would be an invaluable addition to Vancouver's Social Infrastructure Plan, which calls for an inventory of existing social assets and the identification of gaps in the inventory.

It is important to note that heat maps only indicate the risk of social isolation or loneliness in a given area, not individual cases; the latter can only be identified by administering validated scales to individuals. This does not mean, however, that the heat maps are useless; to the contrary, they can help identify possible high-risk areas that had not been considered before, and can help allocate limited resources more effectively.[346]

To improve accuracy, this approach should ideally be paired with local knowledge of neighbourhoods, as discussed in more detail in Recommendation #3. To allow others to make use of this valuable information, the heat maps should be published online.

Recommendation 2: Capitalize on the existing network of trusted service providers, including first responders, to identify those at risk for social isolation or loneliness.

Time Frame: Medium-term

Suggested Lead: City of Vancouver

Suggested Partners: Vancouver Fire and Rescue Services; Canada Post; Vancouver Coastal Health; United Way of the Lower Mainland

According to the National Seniors' Council, "A 'reactive' approach is currently in place to address the needs of socially isolated individuals, many of whom are not identified or supported until after a crisis. Stakeholders believe that more outreach is required: it is important for frontline workers to 'knock on doors'".[347] This type of proactive identification could not only help alleviate social isolation and loneliness, but could also advance Vancouver's goal to become a resilient city in the aftermath of emergencies or disasters (see 100 Resilient Cities program[348]). Cities in Japan, in which large numbers

[346] Age UK, 2017
[347] National Seniors Council, 2014, p.12
[348] https://www.100resilientcities.org/

of seniors often die alone and unnoticed[349], are now making a proactive effort to identify where they live[350], not only to reduce the emotional pain of isolation and loneliness, but to reduce their disproportionately high mortality risk after disasters like earthquakes.[351]

To help identify and reach out to isolated and lonely older adults in Vancouver, participants in the community consultations recommended capitalizing on the City's existing network of first responders and other frontline professionals. Following the example of other municipalities, three potential groups of frontline workers could potentially adopt this role in Vancouver, given their unique position in local communities.

Vancouver Fire and Rescue Services

Vancouver Fire and Rescue Services (VFRS) currently offer a free Home Safety Check Program[352] that residents, tenants, and property owners/managers can access. Firefighters come to a resident's home and look for safety hazards, and then make recommendations to reduce those hazards (e.g., changing smoke detector batteries, fixing electrical problems, storing flammable materials safely). There are at least three ways this program could be improved to address social isolation and loneliness:

1. Rather than rely exclusively on referrals from residents, tenants, and property owners/managers, VFRS could proactively conduct annual home safety visits for individuals living in areas identified as above-average risk for isolation. Given that many of the risk factors for fires in the home are the same as those for isolation (e.g., living alone, suffering a fall), individuals identified as having one or more risk factors could, with their permission (or permission from their substitute decision maker), be referred to an outreach worker or case manager who could assess their social situation and offer possible referrals to programs and services (see Recommendation #5). For those who do not wish to be referred, VFRS could leave behind useful information (e.g., material from the public education campaign described in Recommendation #18) or put them on a mailing list to receive updates about services and programs in their neighbourhood.

   Under the current Home Safety Check Program, VFRS already refer individuals to appropriate agencies if unsafe conditions are found (e.g., unhygienic living or hoarding[353]). It is recommended, however, that referrals also be offered to those at risk for isolation but who are not necessarily living in hazardous conditions.

[349] Bremner, 2015; Onishi, 2017
[350] Waterson, 2014
[351] Otani, 2010. See also Pekovic, Seff, & Rothman, 2007.
[352] http://vancouver.ca/home-property-development/book-a-free-home-safety-check.aspx
[353] Hoarding itself may be a risk factor for isolation and loneliness, and may also be an outcome (Pertusa et al., 2008; Whitfield, Daniels, Flesaker, & Simmons, 2012).

According to the Campaign to End Loneliness, the Cheshire Fire and Rescue Services in the United Kingdom have had success with safety and wellness visits,[354] as have the West Sussex Fire and Rescue Services.[355] The Scottish Fire and Rescue Service have also started a similar program.[356] In Canada, the City of Hamilton runs weekly paramedical drop-in sessions in social housing buildings, which could serve as an opportunity to assess residents' social needs.[357]

2. To improve targeting, the Home Safety Check Program could be advertised in different languages in doctors' offices, pharmacies, physiotherapy clinics, and other medical settings, given that individuals with health and mobility problems are at increased risk for social isolation and loneliness. For municipalities that have data-sharing arrangements with local or provincial health authorities, fire and rescue services could consider using medical information to identify households with seniors who are at especially high risk for isolation or loneliness, such as those visiting the doctor or emergency room frequently; those using home oxygen therapy or mobility assistance devices; those with sensory loss or cognitive impairment; and those providing or receiving home care.

   According to the Campaign to End Loneliness, the Exeter Data System has been used to identify neighbourhoods and households containing residents with a large number of these risk factors.[358] To protect confidentiality, names are removed from the database; to identify the specific individual(s) at risk for isolation or loneliness, some type of visit or other contact is needed before any services are arranged. A particular benefit of this approach is that it may identify isolated or lonely people who do not live in high-risk areas as identified by heat maps. The Campaign cites "the benefits of partners being willing to step outside of existing procedures and explore how data could be shared in safe ways in the interests of older people experiencing loneliness."[359]

   Landlords are another potential source of data, as many already collect information pertaining to mobility problems and household hazards. These data are available to VFRS for emergency purposes, but could also be used for Home Safety Check visits. Unfortunately, these data are not always current, so VFRS might wish to work with landlords to ensure that these data are updated more frequently. They could also consider possible data-sharing arrangements with other rescue services, including police and ambulance.

---

[354] Broome, 2016
[355] https://www.youtube.com/watch?v=Of2iecW-mA8
[356] https://www.inverness-courier.co.uk/News/Reach-Out/Fire-service-pledges-to-tackle-loneliness-in-Highland-communities-22072016.htm
[357] CBC News, June 1, 2018
[358] Broome, 2016
[359] Broome, 2016, p. 17

3. To assist with home safety checks, VFRS could consider the pros and cons of recruiting volunteers from seniors' centres who could accompany them on visits. In some cases, it might be easier to build a rapport with a resident if fire and rescue personnel are accompanied by a senior.

A key reason for the success of these programs is that residents and landlords tend to trust fire and rescue services and are willing to open their doors to them.[360] In Vancouver, an expanded Home Safety Check Program could provide an invaluable opportunity to reach the most vulnerable. Indeed, participants in the community consultations frequently cited the difficulty of reaching seniors living in high-rise buildings—a group that may be at risk for isolation and loneliness.[361]

Another advantage to using VFRS is their "dementia-friendly" training and experience as first responders in medical emergencies, many of which involve seniors. Indeed, in recognition of these skills, the Age-Friendly Action Plan recommended that all of Vancouver's fire halls be designated as places that seniors can visit if they are in distress or need referral to resources.

In addition to the obvious benefits for seniors, a proactive, preventative approach to identification has advantages for VFRS, as well. In particular, referral to appropriate resources could minimize unnecessary non-emergency visits and reduce health problems that require frequent medical response. Moreover, VFRS and other agencies would be in a better position to locate survivors after an earthquake or other emergency.

In addition to VFRS, partnerships with the Vancouver Police Department and its community policing centres could also be explored. In some communities, police officers regularly check in on isolated or otherwise vulnerable seniors, not only to help protect them against crime, but also to provide much-needed social contact.[362]

Canada Post

Postal carriers are in a unique position to identify potentially isolated seniors. Not only do they reach every part of the city, but they also know their neighbourhoods well and can spot signs that residents might be in distress (e.g., mail piled outside the door). Moreover, for some seniors, a visit from the postal carrier is the only human contact they have all week. Postal carriers are also in a unique position to collect and relay data about safety hazards and barriers that may increase the risk for isolation and loneliness (e.g., by using smartphones to report poor street lighting, uneven sidewalks, and unsafe

[360] Broome, 2016
[361] Vancouver Foundation, 2012b
[362] Kaye, 2018. More generally, it would be worthwhile for police and others to interact more frequently with the public and get to know the people in the neighbourhoods that they serve (InWithForward, 2019).

streets).[363] For these and other reasons, the City may wish to consider following the example of other countries that capitalize on the postal service to identify isolated or lonely seniors: [364]

1. Through the *Carrier Alert* program, letter carriers for the United States Postal Service alert local authorities if they notice an accumulation of mail or other signs that might indicate an accident or illness.[365]
2. In a pilot project in Rotterdam, PostNL workers participated in a "Report Isolation" pilot program in which possible signs of isolation were reported to local health authorities or police.[366]
3. In another pilot project in Rotterdam, postal carriers visited seniors at the request of local health authorities and administered brief intake questionnaires to assess their social needs. With permission from the residents, the information was relayed to municipal authorities, who followed up with referrals as required. PostNL indicated that seniors were satisfied with the service and postal carriers found it to be a useful addition to their work.[367]
4. Belgian Post administered intake questionnaires at the door to give local health authorities a better picture of the social condition of seniors in specific neighborhoods.[368] In Vancouver, this kind of data could be used to construct the heat maps described in Recommendation #1. To address potential confidentiality concerns, data should be anonymized and reported in aggregate form, or questionnaires could be left with residents who could then return them by mail.
5. French Post, German Post, and Jersey Post currently have (or have had) check-in programs in which postal carriers make weekly visits at the request of residents.[369] Finnish Post even provides brief "buddy walks" for isolated seniors.[370] A small fee is typically charged for these services, providing a new revenue stream for the postal services. For isolated and lonely people, these visits can provide the kind of consistency that allows them to become more comfortable with people and can gradually build their confidence to venture out and take greater social risks. In Vancouver, these services could complement those offered by Better at Home[371] and other programs, which are often limited by the number of available volunteers.

---

[363] Havelaar, 2016b; United States Postal Service, Office of the Inspector General, 2016
[364] Havelaar, 2016a
[365] United States Postal Service, 2017
[366] Havelaar, 2016a
[367] PostNL (nd)
[368] Havelaar, 2016a
[369] Campbell, 2017; Duitsland Nieuws, 2014; Het Nieuwsblad, 2015; Jersey Evening Post, 2015
[370] BBC, 2016b
[371] http://betterathome.ca/

In each of these scenarios, training for postal workers is typically conducted by elder care specialists. In Vancouver, training could be arranged in partnership with the SFU Department of Gerontology, the UBC Department of Social Work, and the United Way of the Lower Mainland, which currently provides training for Better at Home volunteers.

Although national policy issues are beyond the scope of this report, the various ways in which postal workers can help prevent or minimize isolation and loneliness underscores the need to preserve door-to-door mail service in Canada.

Vancouver Coastal Health: Home Care Nurses

Identification of isolated or lonely seniors could also be aided by homecare nurses from Vancouver Coastal Health. These nurses currently provide care for individuals returning from hospital or who have chronic health issues, but it may be possible to extend their services to seniors who have been identified as being at high risk for isolation or loneliness (e.g., through physician referrals). Home care nurses are highly trained and have the requisite skills to communicate with vulnerable seniors and to conduct assessments for social needs. Moreover, they have access to medical records that provide clues about individuals who may be at high risk for isolation or loneliness. At the same time, home care nurses have a heavy workload and are typically deployed to work with patients who have specific medical conditions; it is unknown if there is sufficient resource capacity to deploy these nurses in a screening capacity, especially on a regular basis.

Sectors: Not-for-Profit, Individuals

Recommendation 3: Create "community teams" and capitalize on "local intelligence" to identify socially isolated or lonely seniors.

Time Frame: Medium-term

Suggested Lead: City of Vancouver

Suggested Partners: Seniors' centres; seniors' hubs; neighbourhood houses; community centres

As discussed above, frontline workers who have the potential to encounter seniors on a regular basis (e.g., postal carriers) have intimate knowledge of their neighbourhoods and can spot warning signs of isolation or loneliness. However, there currently exists no mechanism by which this local knowledge can be shared and discussed with others who live or work in the same neighbourhood. As mentioned in the community

consultations, although the insights of one person can be very valuable, the combined insight of multiple community members can be even more valuable in painting a complete picture about who is isolated or lonely; how isolation or loneliness is experienced in certain neighbourhoods; and what the unique risk factors are in those neighbourhoods.[372] This "hyper-local" information would be a valuable addition to heat maps and other top-level quantitative data, as it would allow for a finer-grained identification of potentially isolated or lonely people.[373]

Given this shortcoming, it is recommended that the City consider working with local seniors' centres, seniors' hubs, and neighbourhood houses to coordinate community teams comprised of local service providers, residents (including seniors themselves), building managers, and others (e.g., firefighters, police officers) who know their neighbourhoods intimately and who are in a position to identify seniors experiencing, or at risk for, isolation or loneliness. As stated by some respondents in the community consultations, this would be akin to a "neighbourhood watch" or "block watch" program for at-risk seniors.

The teams could also supplement their work with up-to-date open data sources. For example, given that bereavement is a risk factor for loneliness, especially for men,[374] teams might monitor obituary notices or other information to identify seniors who have recently lost a partner. Community team members who have personal relationships with these seniors could then keep an eye out on them and offer support if warranted (e.g., if a widower never seems to leave his house anymore). As always, it would be important to consider how to balance this approach with appropriate respect for seniors' privacy.

Community teams could also partner with local academics to collect local survey data about social networks and service use to determine whether and how residents' social needs are being met (or not being met) and to co-create community-specific interventions and policy recommendations based on neighbourhood assets and cultural norms.[375] This would provide a more nuanced approach to the City's Social Infrastructure Plan and align well with a key recommendation in the Healthy City Strategy: to examine processes that affect relationships with and between residents.

[372] Kantar Public, 2016
[373] Broome, 2016
[374] Beach & Bamford, 2016; Dahlberg et al., 2015; Nicolaisen & Thorsen, 2014
[375] Broome, 2016

<u>Recommendation 4</u>: Provide training to service providers and others to identify socially isolated or lonely seniors.

Time Frame: Medium-term

Suggested Lead: City of Vancouver Social Policy & Projects Division

Suggested Partners: Local academics; BC Psychogeriatric Association; BC Care Providers Association

As discussed in the literature review, isolation and loneliness (especially the latter) are highly stigmatized. Moreover, chronically lonely people may inadvertently behave in ways that suggest they do not desire social contact, even though they desperately crave it. Both of these issues can confound efforts to identify isolation/loneliness and to broach the subject with those who may be experiencing these problems.

Given these concerns, it is recommended that the City partner with local academics to provide periodic training sessions in the assessment of isolation and loneliness for those who are most likely to encounter seniors on a daily basis. This includes apartment building managers; healthcare providers (e.g., pharmacists, dentists, and especially family physicians[376]); first responders; social service providers; library and community centre staff; bank tellers; churches; and businesses like coffee shops, hair salons, and barber shops. Lawyers who prepare wills or handle estates should also be included.[377] Training all of these people is important because, as stated in the community consultations, it is important to have "multiple points of contact" with seniors.

Training sessions could be tailored to each group and should cover several topics:

- Overview of isolation and loneliness: distinctions, functions, risk factors
- Identifying behaviours that might be signs of chronic isolation or loneliness
- Sensitively broaching the topic of loneliness, given the stigma that surrounds it and the heightened emotional state of lonely people
- Communicating effectively and building safe, consistent, and trusting relationships with people who may be wary of social contact as a result of chronic isolation or loneliness[378] (as stated in the community consultations, this may be especially important for people who have previously experienced discrimination

[376] Holt-Lunstad & Smith, 2017
[377] Campbell & Elmer, 2015
[378] Campbell & Elmer, 2015

or trauma, as they may be doubly distrustful of people perceived to be in positions of power)

- Administering and interpreting validated instruments to get a better sense of isolation and loneliness in a given setting.[379] Examples include the Berkman-Syme Social Network Index[380], Lubben Social Network Scale[381], Cohen Social Network Index[382], UCLA Loneliness Scale (Appendix A), and de Jong Gierveld Loneliness Scale (Appendix B). For more information, see Valtorta et al.[383]
- Using informant ratings of isolation and loneliness (e.g., from family members), given that they are moderately associated with self-ratings.[384]
- How to spot loneliness in yourself before it adversely affects you and your ability to serve the people you work with or care for (which is especially important given that loneliness can be "contagious" and spread through social networks[385])
- Knowing who to contact if isolation or loneliness is suspected

[379] It should be noted that not all of these scales are necessarily suitable for individual diagnostic purposes. The de Jong Gierveld Loneliness Scale (Appendix B) has been used primarily for research purposes to study loneliness in the aggregate (e.g., to measure average rates of loneliness among large groups of people in a given setting or neighborhood, or to measure changes in loneliness during an intervention study). Although the scale's reliability is sufficient for this purpose, it is not high enough for individual assessment (de Jong Gierveld & van Tilburg, 2017). The scale's developers are, however, in the process of drafting an assessment protocol for loneliness, part of which involves the use of the Loneliness Scale. At the moment, the UCLA Loneliness Scale (Appendix A) may be more useful for assessment purposes given that it is longer and therefore more reliable.

[380] Berkman & Syme, 1979

[381] Lubben et al., 2006

[382] Cohen et al., 1997

[383] Valtorta et al., 2016a. These authors provide a general overview of scales to measure different facets of social connectedness. They organize scales along two dimensions: the degree to which they measure structural vs. functional aspects of relationships, and the degree to which they assess subjective perceptions. For loneliness in particular, the Campaign to End Loneliness (2015a) offers a detailed primer to help organizations evaluate the pros and cons of each loneliness instrument. The Campaign has also published an informative background paper that discusses additional considerations in the measurement and evaluation of isolation and loneliness in practical settings (Jopling, 2014). If used in the aggregate, the de Jong Gierveld Loneliness Scale (Appendix B) is the preferred measure as it has been rigorously developed and validated with older adults and because it measures both emotional and social isolation. However, this scale measures intensity of loneliness at the present moment rather than frequency of loneliness over time; if frequency is of interest, the UCLA Loneliness Scale (Appendix A) may be more suitable. A one-item scale that directly asks respondents if or how lonely they feel is also feasible, given its strong correlation with other loneliness scales (~.70), but it could lead to underreporting due to stigma or the difficulty for some people of consciously recognizing and verbalizing loneliness (Marangoni & Ickes, cited in Shiovitz-Ezra & Ayalon, 2012). Moreover, a one-item scale is less reliable than a multi-item scale. Indeed, research suggests that single- and multi-item scales yield different prevalence estimates and different correlations with variables like age and education (Shiovitz-Ezra & Ayalon, 2012).

[384] Luhmann et al., 2016

[385] Loneliness may spread as it causes aversive social behaviours that are reciprocated by others in a chain-reaction fashion (Cacioppo, Fowler, & Christakis, 2009; see also Simon & Walker, 2018).

To optimize limited resources, a "train-the-trainer" model could be used. In addition, training could be targeted to people who work with seniors in areas where the risk for isolation or loneliness is high (as identified, for example, by heat maps). To reach a broader audience, and to provide a quick-reference for trainees, an online training manual or self-directed course could also be developed and hosted on a loneliness resources website (see Recommendation #18). In addition to these specific training sessions, it is recommended that all new staff and volunteers in senior-serving organizations receive some general information about isolation and loneliness so that the topic is given prominence rather than addressed as a minor side topic.

Given that isolated and lonely seniors are more likely than others to visit family physicians[386], and that a doctor's visit may be their primary source of social contact, physicians are in a unique position to screen for isolation and loneliness and to make referrals as needed (e.g., to the central hub described in Recommendation #5). [387] Unfortunately, about a quarter of Vancouver residents are without a regular family physician.[388] For this reason, it is recommended that the City work with Vancouver Coastal Health and other partners to focus more urgently on a key goal of the Healthy City Strategy: ensuring that all residents are attached to a family doctor. In the meantime, physicians in walk-in clinics should also be trained in identifying isolated and lonely people and providing support or referrals as needed.

Equally important, physicians should be encouraged to ask tactfully about patients' social needs and to make them feel comfortable to discuss isolation or loneliness in their office. This is especially important when a physician suspects that these problems are impacting his or her patient's health (e.g., self-neglect; refusing care). Many patients, however, feel it is inappropriate to discuss isolation or loneliness with their physician because they are private matters and are not perceived to be as serious as a physical issue (even though, as discussed earlier, they clearly has implications for physical health).[389] Moreover, some patients also lack a close enough relationship with their physician to discuss their social needs. Others think that their physician is not knowledgeable about[390], or even interested in, discussing isolation or loneliness, so they avoid raising the issues. Rushed appointments are an additional barrier precluding discussion about patients' social needs.

Physicians should ask tactfully about patients' social needs and make them feel comfortable to discuss loneliness in the office.

[386] Gerst-Emerson & Jayawardhana, 2015; Shaw et al., 2017
[387] Holt-Lunstad & Smith, 2017
[388] Vancouver Coastal Health, 2014
[389] Kharicha et al., 2017
[390] A poll of British physicians found that about half did not feel equipped to help their lonely patients. Only 13% felt confident (Campaign to End Loneliness, November 2013).

Given that both recipients and providers of care are at increased risk for isolation and loneliness due to various factors associated with caregiving[391], it is suggested that periodic training sessions similar to that described above also be provided to the general public. This could be coordinated with the BC Psychogeriatric Association and the BC Care Providers Association, and could be hosted at the Vancouver Public Library on National Seniors' Day (November 1) or during BC Seniors' Week in June.

Outreach

Sector: Government

Recommendation 5: Streamline referrals by creating a coordinated "first-contact" scheme.

Time Frame: Medium-term

Suggested Lead: Vancouver Coastal Health

Suggested Partners: Vancouver Coastal Health; BC211; 411 Seniors Centre Society; Crisis Centre of BC; Community Response Networks; West End Seniors' Network; Better at Home

Although frontline workers who encounter seniors on a regular basis are in an ideal position to screen for social isolation and loneliness[392], connecting these seniors with appropriate services is a challenge. As mentioned repeatedly by participants in the community consultations, as well as consultations in other cities[393], people often do not know who to contact or which services to recommend when they are concerned about a senior's welfare. Moreover, agencies are often unaware of the services that other agencies provide due to lack of information sharing.

Agencies are often unaware of the services that other agencies provide due to lack of information sharing.

[391] These factors include dissatisfaction with the caregiving relationship as well as lack of outside support (Chappell & Funk, 2011; Lecovich, 2016; Robison et al., 2009). Caregivers may struggle with isolation and loneliness as they experience a change in their existing identities, social roles, and activities (Sherman & Lacarte, 2012, cited in National Seniors Council, 2017). As suggested in the community consultations, caregiving might in some cases strain an already strained relationship.
[392] Nicholson, 2012
[393] e.g., Peterborough Council on Aging, 2017; National Seniors Council, 2014

The result is a fragmented system that can leave even the most highly trained frontline workers frustrated.

While keeping in mind various privacy and liability issues that would need to be addressed, it is recommended that Vancouver Coastal Health consider coordinating a type of "first-contact" scheme, variations of which currently exist around the world.[394] In such a scheme, any participating agency or professional who makes first contact with a senior—even if their own service is not required—agrees to complete a common screening tool with the senior (or their care-provider) that assesses their current social situation and screens for possible isolation or loneliness. To minimize stigma and also ease the burden on service providers, the assessment can be incorporated within service providers' standard intake forms (e.g., forms completed when a senior visits a physician or a seniors' centre day program).

With the client's permission, these "gatekeeper" agencies send the form to a central referral hub, which in turn forwards the information to one of several participating community partners. If the assessment form indicates that the client may be socially isolated or lonely, the partner agency contacts or visits the client and offers referrals to appropriate services. These partners function as "community navigators" and could include BC211, Seniors 411 Centre, HealthLink BC, the BC Crisis Centre, seniors' centres such as the West End Seniors' Network, or any other agencies that employ trained information and referral specialists.

A first-contact scheme streamlines the screening and referral process, and also relieves seniors of the burden of having to navigate the complex social services system on their own.

For members of the general public concerned about potentially isolated or lonely seniors, including those working as part of the community teams described in Recommendation #3, a widely publicized phone number or website could be provided for the central referral service. Individuals could also self-refer to the service.

The first-contact scheme streamlines the screening and referral process and also relieves seniors of the burden of having to navigate the complex social services system on their own (especially if they do not have access to a computer). There is also a benefit from a research standpoint: data collected from the scheme could be used to supplement the heat maps described in Recommendation #1.

[394] Goodman, Adams, & Swift, 2015

According to a review by the Campaign to End Loneliness, several first-contact schemes exist in the UK. The Campaign cites a community development manager in the UK who administered a successful first-contact scheme:

> All the…social services built it into their new systems, so it was massive… and then all of those questions [from the common assessment form] would come into my service and we would either signpost people to agencies, or give them information.[395]

The Campaign also cites the manager of the Dorset Partnership for Older People Programme[396] and Dorset Safe and Independent Living Scheme.[397] In her experience, the program is cost-effective and fairly easy to administer because it only requires that participating agencies add a short, routine screening form to their existing practices in a seamless, "business as usual" manner.

Variations of these programs exist in Canada, notably the Niagara Gatekeepers program[398], which also includes a public referral phone line; this service was mentioned by several participants in the community consultations. The City of Hamilton's Seniors Isolation Impact Plan[399], which is discussed in the report by SPARC BC[400], also features a gatekeeper component.

Given that loneliness, in particular, is a highly individual, subjective state, it is crucial that community navigators go beyond merely providing a generic list of resources. In line with research indicating that interventions are most effective when they are person-centered and take clients' individual needs and preferences into account[401], navigators might need to adopt a case management role in which they take time to get to know a client, present them with a menu of suitable options, and help them create an action plan comprising the programs and services they feel would work best for their individual situation.[402]

Ideally, these specialists would follow up with the clients to see if they are satisfied with the services and, if not, whether other services might be more suitable. If needed, the gatekeeper agencies could enlist the case management services of Vancouver Coastal Health, Family Services, or a related agency. The importance of following up was frequently cited by participants in the community consultations, and it is especially

---

[395] Goodman, Adams, & Swift, 2015, p. 24
[396] https://www.dorsetforyou.gov.uk/popp
[397] https://www.mylifemycare.com/Safe-and-independent-living
[398] https://www.niagararegion.ca/living/seniors/programs/gatekeepers.aspx
[399] http://socialisolation.ca/
[400] SPARC BC, 2017
[401] ACEVO, 2015; Campaign to End Loneliness, 2015b; Kadowaki & Cohen, 2017
[402] The BC211 database of community resources could be used to assist gatekeepers with the referral process (http://www.bc211.ca).

critical for lonely people who are prone to be pessimistic about their situation and quickly give up if their situation does not improve right away.[403]

For seniors who may be resistant at the outset from accessing services, or who may be likely to drop out of programs prematurely—which is not uncommon in chronic cases of loneliness—the use of "supported access" should be considered, as discussed in the next recommendation.

Sectors: Not-for-Profit, Individuals

Recommendation 6: Incorporate elements of "supported access" into programs.

Time Frame: Medium-term

Suggested Lead: TBD

As discussed in the literature review, chronically isolated and lonely people may develop negative perceptions of other people, become socially anxious, and withdraw even further, even though they actually desire social contact. Moreover, as a result of recent changes in their lives, such as bereavement or becoming a caregiver/recipient, they may lack the motivation or energy to socialize. Therefore, even if a senior is identified as socially isolated or lonely, and agrees to be referred to services, they might still avoid accessing these services. Participants in the community conversations cited this as a common problem. More generally, people tend to be reluctant to go to activities alone[404], which is a particular challenge when trying to engage seniors who live alone or do not have a partner.[405] To help address these issues, service providers should consider offering "supported access" services, such as the LINKS program[406] offered by West Vancouver Parks and Recreation.

In these schemes, seniors are paired with support workers or volunteers who provide emotional support and motivation to attend programs and may even accompany them until they become confident enough to attend on their own.[407] Support is then gradually reduced. To help break the cycle of chronic isolation and loneliness, it often takes someone to walk a senior to the door or get them out of the house—a small, positive social interaction that can lead to a "virtuous circle" of larger, increasingly positive

[403] Cacioppo & Patrick, 2008
[404] Haven et al., 2004; National Seniors Council, 2014
[405] McInnis & White, 2001
[406] https://westvancouver.ca/parks-recreation/community-centres/seniors-activity-centre
[407] Mann et al., 2017

interactions.[408] If workers or volunteers are able, it can also be of great benefit to offer rides to and from programs, given that lack of accessible and affordable transportation was often cited in the community consultations as a barrier to social participation, especially for people with disabilities.[409]

In supported access programs, workers and volunteers also re-engage clients who unexpectedly reduce use of services or withdraw altogether, which is not uncommon among chronically isolated or lonely individuals. In these cases, it is important to be persistent (within reason) and to continue to offer gentle support and encouragement in order to challenge the client's expectation of rejection or their perception that people are unreliable.[410] One should not necessarily assume that a client who withdraws socially simply wants to be left alone.

One should not necessarily assume that a client who withdraws socially wants to be left alone.

Supported access programs may be especially useful for ethnic minority seniors and other at-risk groups, who may be reticent to access services due to stigma, language difficulties, cultural differences, and other barriers. Supported access can be considered one part of a broader approach in which isolated or lonely seniors are encouraged to gradually ease their way back into social interactions. This approach, described by Cacioppo and Patrick[411], involves the following:

E: Extend yourself gradually with small interactions in safe places. Even something as simple as saying hello to a grocery store clerk or sitting in a low-threshold meeting place like a park or mall without talking to anyone (i.e., "purposeful loitering"). This can help you gradually become more comfortable and confident around people and reduce discouragement. If homebound, a brief phone call to a friend or neighbour, a short Skype session, or a greeting to the postal carrier can be an effective alternative

A: Have an action plan. Plan regular social activities and stick with them even if you do not feel like it. This will counter the self-protective tendency to withdraw from people.

S: Select carefully: seek meaningful activities you like with people you have things in common with. This can help maintain engagement even when you feel like giving up.

E: Expect the best. Understand that isolation and loneliness can cause social anxiety and a tendency to perceive others negatively. Expecting the best from people and giving them the benefit of the doubt can help ease these tendencies.

[408] Cacioppo & Patrick, 2008
[409] See also: Kadowaki & Cohen, 2017; National Seniors Council, 2014
[410] Cacioppo & Patrick, 2008
[411] Cacioppo & Patrick, 2008

<u>Recommendation 7</u>: Expand the City's *Hey Neighbour!* program in multi-unit residential buildings and consider implementation in single-dwelling neighbourhoods.

Time Frame: Short-term

Suggested Lead: City of Vancouver

Suggested Partners: BC Apartment Owners & Managers Association; Vancouver Tenants Union; City of Vancouver Renters' Advisory Committee; West End Seniors' Network and other seniors' centres

To date, strategies to prevent or reduce social isolation and loneliness have tended to focus on older adults in community centres, residential care, and other locations outside of their homes. Unfortunately, these strategies leave behind many older adults who may be unable, or unwilling, to venture outside of their homes—a notable barrier to social connection. For these adults, their main source of social interaction may be their neighbours.

Unfortunately, as stated frequently in the community consultations, apartment buildings and condominium towers are not always conducive to social interaction, and many residents in such dwellings find it difficult to get to know their neighbours. In Metro Vancouver, surveys suggest that the number of people who never chat with their neighbours is twice as high in high-rise buildings compared to low-rise buildings.[412] With the caveat that these data are not adjusted for possible confounding variables nor based on a random sample of respondents, they align with concerns others have raised about the overall quality of life in high-rise buildings.[413] These data also raise concerns from an emergency planning perspective, given that relatively small emergencies can affect large numbers of people living in close proximity. Moreover, first responders may not be available right away when disaster strikes and some residents who need help may not be located quickly. Situations like this can turn out much better when neighbours are socially connected.[414]

In response to these concerns, the City of Vancouver has been piloting *Hey Neighbour!*, a program in which tenants of multi-unit residential buildings are trained and paid to function as resident animators—colloquially known as "social concierges"— whose role is to coordinate social events, bring residents together, and reach out to those who may be chronically lonely or isolated.[415] To expand the program, the City could partner with

[412] Vancouver Foundation, 2012b
[413] Gifford, 2007
[414] Bailey, 2017; Pekovic et al., 2007
[415] http://vancouver.ca/people-programs/hey-neighbour.aspx

the newly formed Vancouver Tenants Union[416] to recruit additional resident animators. The Union aims to have a representative in every apartment building and would therefore be in a unique position to nominate tenants who might be willing to act as resident animators.

A key challenge in implementing this program on a wider scale is the reluctance of some landlords and property managers to permit such programs in their buildings, especially if they are concerned about privacy. Indeed, despite the virtues of a resident animator program, it must be recognized that not everyone wishes to be social with their neighbours or to participate in planned social activities.[417] Moreover, even if residents wish to participate, they like to feel in control of their social lives and do not welcome "forced" interactions. It is important, therefore, to strike a balance between providing opportunities for social interaction and respecting residents' needs for privacy and autonomy.[418]

It is important to strike a balance between providing opportunities for social interaction and respecting residents' needs for privacy and autonomy.

Beyond privacy, landlords and property managers might not understand the value of this type of program in improving social well-being and emergency preparedness. To overcome this challenge, the City should consider liaising with the BC Apartment Owners & Managers Association to inform them about the benefits of resident animators, including examples of successful programs already underway in the city (e.g., District Main Residences[419]). The Association could informs its members and encourage interested landlords/managers to contact the City for more information.

To optimize program impact, the following suggestions are offered:

- Resident animators could be placed in buildings located in areas at high risk for isolation or loneliness (although residents in buildings throughout the city are likely to benefit from such a program).
- In conjunction with building managers/landlords, resident animators could hold "office hours" on a regular basis. Office hours are a great opportunity for residents to chat with their manager/landlord and also increase the chance that they will bump into other tenants.

[416] http://www.vancouvertenantsunion.ca/
[417] Tavakoli, 2017
[418] Montgomery, 2013; Tavakoli, 2017
[419] http://www.districtmain.com

- Following the example of organizations like the Brightside Community Homes Foundation[420], resident animators could conduct detailed surveys about the types of activities that residents might like to see in their building.
- Resident animators could join the community teams described in Recommendation #3.
- Resident animators could take part in the first-contact scheme described in Recommendation #5 and be trained to provide resource referrals if needed.
- Resident animators could consider working with local seniors' centres like the West End Seniors' Network, which recently launched a "Close to Home" program that brings educational and social programming directly into the lobbies and common areas of high-rise buildings in the West End. Resident animators could ask residents what types of programming they might like in their buildings and then work with seniors' centres to it to their buildings.
- Resident animators could use community-building websites to assist in their duties. For example, www.GoNeighbour.org and www.thevillage.io allow residents to chat with one another, ask or offer practical assistance (e.g., snow shoveling), buy/sell/borrow goods, or manage group discussions.

Although isolation and loneliness may be more prevalent in high-rises and other multi-dwelling buildings (more data is needed on this topic), it is important to remember that these problems can befall anyone, regardless of living situation or income. Even middle- and upper-income people can be isolated or feel lonely. In fact, as mentioned during the community consultations, middle-income people in particular may be at risk not only because of their financial situation (socializing can be expensive) but also because they are less likely to come to the attention of service providers, who generally tend to focus on those with lower incomes. With this in mind, the resident animator program could conceivably be expanded to neighbourhoods with single-dwelling homes.

In those areas, one or more resident animators could be trained and supported to organize social activities for the entire neighbourhood (e.g., inexpensive block parties, garage sales) or facilitate information exchange about relevant social events and programs. The community-building websites described above could be used to facilitate this process even at the neighbourhood level.

In all cases, it is suggested that events be recurring, rather than "one-offs." This increases the likelihood of attracting people who might initially be hesitant to participate. This is especially important for people who have become wary of social contact after prolonged isolation or loneliness. It also provides the type of continuity that can help foster the gradual development of relationships.

[420] https://brightsidehomes.ca

Services and Interventions

In the context of service provision, the National Seniors Council makes three broad recommendations for helping to prevent or reduce (chronic) social isolation and loneliness:[421]

1. Encourage and help service providers to create more programs that specifically address social isolation and loneliness.
2. Strengthen existing programs so they work better for social isolation and loneliness.
3. Encourage more older adults to use these services.

The following are some practical strategies in line with these broad recommendations.

Sector: Academic

Recommendation 8: Create a central database of empirically validated interventions (or promising interventions) and host an annual or semi-annual information summit, bringing together academics, social service providers, and interested members of the public to discuss best practices and explore partnerships.

Time Frame: Short-term

Suggested Lead: SFU Gerontology Research Centre

Suggested Partners: Local academics; BC Psychogeriatric Association; City of Vancouver Seniors' Advisory Committee; Raising the Profile Project

As mentioned in the community consultations, service providers are interested in effective programs to reduce or prevent social isolation and loneliness, but often do not know where to start. In particular, they lack access to research literature or find it too inconvenient to search in multiple locations. In response to this gap, it is recommended that the City approach the Gerontology Research Centre at Simon Fraser University to create an online database of effective, empirically validated interventions (or promising interventions) for isolation and loneliness. The Netherlands Centre for Social

[421] National Seniors Council, 2017

Development[422] provides an example of this type of database. Agencies that are contemplating starting a new program for isolation or loneliness should be encouraged to check the proposed database to see if there are already interventions that could possibly work for their clients—with modifications if needed—rather than starting a new one from scratch.

Each person's situation is different. There is no easy, one-size-fits-all solution for isolation and loneliness.

Although this recommendation may be quite popular with service providers, it is not intended to be a "cure-all." As discussed in the literature review, isolation and loneliness present in different forms and have many different causes. Each case is different for each person, and thus a tailored approach is necessary. No particular intervention is suitable for all people. Moreover, the effect size for many existing interventions is modest at best.

Participants in the community consultations mentioned the important need to share information and best practices with one another. Therefore, it is also recommended that the Gerontology Research Centre, in partnership with the Seniors' Advisory Committee, host an annual or semi-annual information summit, bringing together academics, social service providers, and interested members of the public to share information and discuss best practices. This would ideally be held during BC Seniors' Week in June and modeled after previous summits co-hosted by the Seniors' Advisory Committee. The summit could feature guest speakers highlighting the latest innovations in isolation and loneliness programs, and could allow for group discussions about successful interventions, barriers to implementation, and opportunities for support and collaboration between service providers.

In addition to the summit, it is may be fruitful to create an online forum to facilitate year-round discussion about these topics between service providers.

[422] https://www.movisie.com

Sector: Not-for-Profit

<u>Recommendation 9</u>: Audit your organization's policies and programs to determine the degree to which they currently address social isolation and loneliness.

Time Frame: Medium-term

Suggested Lead: Not-for-profit organizations

Suggested Partners: SFU Gerontology Research Centre; independent research consultants

As evident from the community consultations, many health and social service organizations recognize that social isolation and loneliness are serious public health issues requiring thoughtful and concerted action. However, despite the valuable role that organizations can play in addressing isolation and loneliness in their programs[423], not all of them know what role they can play or where to start, and they may not be fully aware of the ways in which their current policies and programs impact isolation and loneliness, either positively or negatively.

To redress this issue, it is recommended that organizations employ an audit instrument like the Seniors' Social Integration Tool.[424] This free tool guides organizations in assessing their strengths and weaknesses in several key areas:

- knowledge about social isolation/loneliness, including risk factors
- actions taken by the organization to address barriers to social inclusion and participation (e.g., cultural and language differences)
- outreach efforts
- provision of age-friendly information
- sharing of knowledge and expertise with other organizations

Rather than simply using the tool as a checklist, organizations should use it to formulate goals and document their progress in achieving those goals.

[423] Kadowaki & Cohen, 2017
[424] http://www.seniors-housing.alberta.ca/documents/Seniors-Toolkit-WorkingTogether-2007.pdf (p. 21)

As part of their audit, it is recommended that organizations also use loneliness heat maps to:

- identify locations with high concentrations of seniors at risk for isolation and loneliness
- determine whether their programs reach seniors in those areas and, if not, reallocate resources as needed
- understand the unique risk factors for isolation and loneliness in those areas so that programs can be tailored to address those risk factors (e.g., if there are a high number of widowed people in a neighbourhood, offer more bereavement support groups)

Recommendation 10: Optimize your organization's programs to address social isolation and loneliness, and consider including social-cognitive strategies where appropriate.

Time Frame: Medium-term

Suggested Lead: Individual organizations

Suggested Partners: SFU Gerontology Research Centre; local mental health professionals; independent research consultants and program evaluators

Based on published research as well as suggestions from the National Seniors' Council, the Campaign to End Loneliness, and participants in the community consultations, it is recommended that organizations consider the following tips for program optimization. The suggestions are grouped into five categories:

1. General suggestions for all programs
2. Suggestions for addressing maladaptive social cognition—a key element in managing chronic loneliness
3. Additional psychological strategies and skills to help clients reduce, prevent, or cope with isolation or loneliness
4. Incorporating social-cognitive strategies and coping skills into programs
5. Unconventional interventions for perpetually-isolated seniors

All of these suggestions can be implemented to address gaps identified in an organization's self-audit, as described in Recommendation #9.

General Suggestions for all Programs

- Openly broach the topic of isolation and loneliness in a relaxed, non-judgmental manner. Due to stigma or the fear that service providers may think these are not serious issues (compared to disorders like depression), clients may be reluctant to broach the issues unless someone else does so first. Indeed, many people say they would feel relieved if the topics were raised.[425] Not only could this help to normalize isolation and loneliness and reduce stigma, it could also help reduce the emotional impact of these problems; indeed, the longer a person keeps such problems hidden, the more they think about them and, consequently, the more distress they may experience.[426]
- Ensure that program goals are guided by sound theory and clear definition of concepts. In particular, when formulating program goals, be clear about the problem(s) that you are attempting to target: social isolation, loneliness, social support, social inclusion, social participation, sense of belonging, community cohesion, or a related issue. Avoid conflating these related, but distinct concepts and using them interchangeably.

Avoid conflating similar but distinct concepts like isolation, loneliness, social support, community belonging, etc.

- If the target is loneliness, be clear whether you wish to address social loneliness, emotional loneliness, or both—and understand that different approaches may be required for each. For example, a person who feels lonely because of difficulties adjusting to the death of a spouse or because their existing relationships with friends and family are conflictual, might be better served by a relationship skills or bereavement support group rather than a generic group activity like aerobics or arts and crafts. Recognize that most programs targeting loneliness are actually targeting social/relational loneliness to the exclusion of emotional/intimate loneliness, even though the latter is just as important for health and well-being.[427]
- Understand whether you are dealing with transient vs. chronic loneliness. If transient, this usually resolves on its own or with some support from friends and family; it is unlikely to require intervention, unless a client so desires.[428] Extra support may be considered during stressful transition periods (e.g., bereavement,

[425] White, 2010
[426] Ibid.
[427] de Jong Gierveld, Fokkema, & van Tilburg, 2011; Olds & Schwartz, 2009; Weiss, 1973; White, 2010
[428] de Jong Gierveld, Fokkema, & van Tilburg, 2011; T. Fokkema, personal communication, December, 2017

retirement[429]) to prevent transient loneliness from becoming chronic among individuals with certain risk factors (e.g., very restricted social network; mental health problems)[430], but full-fledged interventions are unlikely to be required. For those suffering from *chronic* loneliness, a more intensive intervention may be required (e.g., cognitive-behavioral therapy to address maladaptive social cognition or unrealistic relationship expectations).

- Keep in mind the particular combinations of isolation and loneliness as described on page 24 by Newall and Menec. For example, while programs to improve social contact might be useful for those who are lonely because they are severely isolated, they may be less useful for those who are isolated but not lonely.

- Consider targeting social isolation and loneliness directly (e.g., a structured friendship enrichment program) rather than just indirectly while focusing on another issue.[431] However, keep in mind the reluctance of many isolated or lonely people to participate in programs that focus on social interaction for its own sake, and especially those that are advertised as being for isolated or lonely people.[432] Targeted programs should, therefore, include some structure and, to the extent possible, meaningful activities that match seniors' individuals interests (e.g., a therapeutic writing program for people who enjoy writing).

- Recognize gender differences in preferred social activities. As mentioned in the community consultations, programs often focus on activities that may appeal more to women (e.g., arts and crafts; coffee mornings) even though men indicate that these activities discourage them from attending seniors' programs.[433] Instead, programs like Men's Sheds[434], which involve activities like construction, furniture finishing, and automotive repair, may be more appealing, especially since men tend to form bonds through shared projects.[435] Given that men are also more reluctant to admit being isolated or feeling lonely, service providers should make a special effort to advertise their programs in places that men are more likely to frequent (e.g., barber shops).[436]

- Allow sufficient time and space for relationships to develop in a *natural, gradual* manner. As program participants get to know one another, they are more likely to maintain contact outside of the program, which may be beneficial in reducing

[429] Not only can job loss or retirement cut people off from an important source of friendship and support, but it can also cut them off from an important source of status and identity, all of which could contribute to isolation and loneliness (Baker, 2017; Osborne, 2012).
[430] ACEVO, 2015
[431] National Seniors Council, 2017
[432] Bamford & Beach, 2016; Kharicha et al., 2017
[433] Beach & Bamford, 2016
[434] http://menssheds.ca; McMartin, 2015
[435] Nardi, 1992; Vigil, 2007
[436] Beach & Bamford, 2016

isolation and loneliness.[437] But developing relationships can be difficult when programs are overly structured; when they attempt to "force" social interactions; when they are crammed into a rigid schedule; or when they last only a few months. Especially for those suffering from chronic loneliness, this does not provide sufficient space and continuity to become more comfortable with people and to develop trust.

Allow sufficient time and space for relationships to develop naturally and gradually.

- Recognize that although there are several universal risk factors for social isolation and loneliness that cut across all groups[438], some may be unique to specific groups, including LGBTQ+, Indigenous, and ethnic minority seniors; those living with HIV; seniors with mental health or substance use problems; caregivers; veterans; and prisoners.[439] Gender differences in risk factors have also been documented.[440]

  Service providers should consider these factors and tailor their programs for groups with similar characteristics and risk profiles. SPARC BC cites some specific examples, such as programs for Indigenous seniors and those with cognitive impairment.[441] To further aid in making programs appropriate for these groups, it is recommended that organizations consult with members of the City of Vancouver's various advisory committees (e.g., Seniors' Advisory Committee, LGBTQ2+ Advisory Committee, Cultural Communities Advisory Committee, and Urban Indigenous People's Advisory Committee). It is also recommended that interventions take into account the needs of seniors with intersecting identities (e.g., ethnic minority LGBTQ+ seniors).

- Although programs for specific groups are important, not everyone likes them. In fact, many older adults avoid "seniors' programs" altogether because they do not perceive themselves to be in that demographic.[442] These individuals may prefer programs for general audiences, so try to ensure that *all* programs are welcoming of all ages. In addition, involve seniors as volunteers or coordinators rather than as recipients only; for many, helping *other* seniors is more appealing than using a service and admitting that they are seniors (or lonely) themselves.

- Offer activities/services that may be more acceptable to introverted people (e.g., book clubs; one-on-one tutoring; online discussion groups; peer support).

---

[437] Havens et al., 2004
[438] Luhmann & Hawkley, 2016
[439] Earnshaw, 2016; Elmer, van Tilburg, & Fokkema, 2018; Gawande, 2009; Greene et al., 2018; Kuyper & Fokkema, 2010; Miles et al., 2011; National Seniors Council, 2017; Syed et al., 2017
[440] e.g., Beach & Bamford, 2016; Dahlberg et al., 2015;
[441] SPARC BC, 2017
[442] Beach & Bamford, 2016; Kharicha et al., 2017

- Develop targeted interventions for people in residential care, who may be quite difficult to engage. Peer mentoring has shown some promise in these settings.[443] In addition, given the high rates of female residents and care providers, it is important to reach out to men and appeal to their specific needs and interests.[444]
- Additional recommendations are offered in Appendix C.

Suggestions for Addressing Maladaptive Social Cognition

While some programs may be effective for *preventing* chronic isolation or loneliness among certain at-risk groups (e.g., those with pre-existing mental health issues or a severely constricted social network), most are far less effective in alleviating these problems once they have become entrenched.[445] This is especially true of chronic loneliness, which tends to be characterized by a self-perpetuating feedback loop of protective, yet maladaptive social perceptions and self-defeating behaviours that are not only antecedents, but also *consequences*, of prolonged loneliness.[446] In these cases, individuals may need to shift from *active* coping (e.g., trying to find new friends) to *regulative* coping (e.g., changing how they think about people).[447] To interrupt the maladaptive feedback loop, service providers may wish to address the following:

- Hypervigilance for social threats (e.g., over-focus on negative aspects of interactions; misperception of ambiguous social cues; false attributions; rejection sensitivity)[448]
- Self-defeating interactions (e.g., mistrust, passivity, hostility, non-responsiveness)[449]
- Excessive self-focus[450]
- Social anxiety[451]
- Poor emotional self-regulation[452]

Some programs may be effective for *preventing* chronic isolation or loneliness, but most are less effective in alleviating these problems once they have occurred.

[443] Theurer, Mortenson, Suto, Brown, Stone, & Timonen, 2017
[444] Bamford & Beach, 2016
[445] Masi et al., 2011
[446] Cacioppo & Hawkley, 2005, 2009; Cacioppo & Patrick, 2008; Cacioppo et al., 2013; Goll et al., 2015
[447] For more information on this distinction, see Schoenmakers, 2013. Fortunately, older adults are already more disposed to regulative coping compared to younger adults (Rokach, 2001).
[448] Jones et al., 1981; Qualter et al., 2015; Vanhalst et al., 2015; Watson & Nesdale, 2012
[449] Anderson & Martin, 1995; Cacioppo & Hawkley, 2005; Cacioppo et al., 2006a; DeWall et al., 2009; Rotenberg, 1994; Twenge et al., 2007
[450] Cacioppo, Chen, & Cacioppo, 2017
[451] Knowles, Lucas, Baumeister, & Gardner, 2015
[452] Hawkley et al., 2009

- Poor relationship self-efficacy (lack of confidence in one's ability to form and maintain relationships)[453]
- External locus of control (believing that relationships "just happen" and are mainly influenced by external factors beyond one's control)[454]
- Low self-worth (e.g., feeling that you have nothing to offer to others)[455]
- Belief that one's loneliness will continue forever[456]
- Learned helplessness and hopelessness[457]

Unfortunately, many interventions do not distinguish between transient and chronic loneliness, and thus do not address the issues listed above. These programs tend to be superficial and consist of little more than placing lonely people together, under the assumption that increasing social contact is sufficient. Chronically lonely people placed together without any effort to address their social cognition or behaviour could simply lead to more loneliness.[458]

Simply putting chronically lonely people in a room together will not help; they might just make each other feel lonelier.

Additional Psychological Strategies and Skills to Help Clients Reduce, Prevent, or Cope with Isolation or Loneliness

- Consider psychoeducational programming to provide general information about isolation and loneliness. For some people, simply discussing or learning about isolation and loneliness can be very helpful.[459]
- Encourage clients to structure their days and create a detailed plan of social activities and to stick with it[460], even when they do not feel like it.[461] This is especially important for chronically lonely people because they often tend to give up easily when starting new social activities.[462]

---

[453] Fry & Debats, 2002; Watson & Nesdale, 2012
[454] Newall et al., 2009, 2014; Vanhalst et al., 2015
[455] Dykstra, van Tilburg, & de Jong Gierveld, 2005
[456] Bodner & Bergman, 2016
[457] Taube et al., 2016; J. Qualter, personal communication, 2015
[458] Hellman, 2011, cited in Campaign to End Loneliness, 2011, p. 15
[459] Laing, 2016; Latson, 2018; White, 2010
[460] van Tilburg, 2007, cited in Expactica, 2007
[461] Bergland et al., 2016
[462] Cacioppo & Patrick, 2008

- Ask clients to re-evaluate their social networks more realistically. For example, ask them if they have more friends than they think they do.
- Work with clients to improve the quality of their existing relationships; this may be easier and more fruitful than trying to create new relationships from scratch.[463]
- To help clients improve the quality of their relationships and avoid disappointments, gently challenge their unrealistic expectations and beliefs (e.g., expecting more attention or support than others can provide; believing that a "true friend" would never hurt their feelings or break a commitment; believing that conflict means a relationship is not strong or is about to end).
- For clients who perceive a genuine deficit in their social networks, ask them to think of this less negatively by remembering that relationships come with both benefits *and* costs.[464]
- Ask clients to re-examine their deeply held belief that they *must* have certain relationships (e.g., a romantic partner) to avoid loneliness and be happy.[465]
- Encourage clients to avoid looking for the "perfect" partner.[466] Such a partner does not exist. As de Jong Gierveld says, "Too many people are too focused on finding their soulmate. When they discover someone does not meet their expectations, they become disappointed and feel lonely."[467]
- Help clients accept the painful reality that they might never find what they are looking for (e.g., a partner). In so doing, they may have more energy to pursue other sources of happiness and may also become more attractive to others.[468]
- Help clients reduce the tendency to compare the size and/or quality of their relationships with those of others; that type of social comparison can increase feelings of loneliness.[469]
- Some clients are unable or unwilling to tolerate even brief periods by themselves; these clients feel intensely lonely when solitary.[470] It may be useful to help them discover the benefits[471] of solitude and to develop greater comfort with it so that they are less reliant upon others to meet their social and emotional needs.[472]

---

[463] Rook, 1984b
[464] Miller, 1997; Rook, 1984a; Stevens, 2001; Weiss, 1973
[465] Bereznai, 2006; Burns, 1999 (chapter 12, "The Love Addiction")
[466] Dykstra & Fokkema, 2009; Sarner, 2018; Weiss, 1973
[467] Cited in Expatica, 2007
[468] Hobbes, cited in Savage, 2018
[469] Perlman & Peplau, 1981
[470] Some would rather receive electric shocks than be alone with their thoughts (Wilson et al., 2014).
[471] Bergland et al., 2016; Dahlberg, 2007; Graneheim & Lundman, 2010; Harris, 2017; Long & Averill, 2003; Storr, 1988; Taube et al., 2016
[472] Rook, 1984a

Interestingly, as people develop greater comfort with solitude, their relationships often improve, perhaps because their social interactions becomes less fearful, urgent, or otherwise counterproductive.[473]

- For clients whose loneliness persists and cannot be reduced, help them put loneliness into perspective and develop greater acceptance and comfort with it.[474] This can be accomplished through mindfulness[475], distraction[476], adding structure to one's day[477], and other elements drawn from approaches like acceptance and commitment therapy.[478] These and the other strategies listed above might help clients derive a sense of personal growth from their loneliness.

Incorporating Social-Cognitive Strategies and Coping Skills into Programs

An assumption of many social-cognitive programs is that lonely people benefit most from acquiring a *variety* of coping skills.

Although there is not one specific way to incorporate social-cognitive strategies and coping skills into programs, agencies can look at examples of other programs that have done so, such as the friendship enrichment program by Stevens and Martina.[479] In this structured program, participants develop several coping skills: becoming more aware of their social needs; adjusting unrealistic relationship expectations; spending time alone and tolerating feelings of loneliness; improving the quality of their existing relationships, and forming new relationships.

A key assumption underlying this program and others like it is that lonely people benefit most from acquiring a *variety* of coping skills. One strategy by itself is unlikely to be helpful in all situations, so having a variety of tools to choose from can greatly increase one's confidence in coping with loneliness.[480]

---

[473] Bowker, cited in Crane, 2017; Elmer, 2018; Hobbes, cited in Savage, 2018; Young, 1982
[474] Bernhard, 2011; Elmer, 2018; Graneheim & Lundman, 2010; Rokach et al., 2004; Rook, 1984a; Stevens, 2001; Theeke & Mallow, 2015; Weiss, 1973; Wong, 2015
[475] Mindfulness involves focusing on the present moment and learning to calmly acknowledge and accept loneliness without judgment. This may help people become less self-critical and self-conscious about being lonely and thus more open to interacting with others (Creswell et al., 2012; Lindsay et al., 2019).
[476] McHugh Power et al., 2017. Many lonely people indicate that remaining mentally and physically occupied with enjoyable, personally meaningful activities (e.g., gardening, church attendance, helping others) or watching television and listening to the radio can help alleviate loneliness (Dahlberg, 2007; Drageset et al., 2015; Hauge & Kirkevold, 2012; Roos & Klopper, 2010; Smith, 2012; Taube et al., 2016; Theeke et al., 2015; Wong, 2015. See also Tse, 2010).
[477] Theeke et al., 2015
[478] Hayes, Strosahl, & Wilson, 2016
[479] Stevens, 2001
[480] Bouwman, Aartsen, van Tilburg, & Stevens, 2017

Although this program did not demonstrate superiority in reducing loneliness compared to a control group (as both groups reported similar reduction in loneliness over the course of the intervention[481]), it includes several promising elements that agencies may wish to refine and test for effectiveness.

LISTEN is another structured program that targets social cognition.[482] In this five-session program delivered in a small group format, participants think about past relationships, learn to identify and correct maladaptive thought patterns, and think about loneliness from different perspectives. As compared to a control group, program participants became less lonely and had lower systolic blood pressure twelve weeks after the intervention.[483]

Addressing maladaptive social cognition can be accomplished individually or in groups. Although mental health professionals like psychologists can work with agencies to design, implement, or lead programs that address these issues, these interventions not necessarily the same as psychotherapy and thus need not be led by clinicians. Indeed, the friendship enrichment program by Stevens and Martina was translated into a manual so it could be administered by staff and volunteers at seniors' organizations, adult education centres, and other settings without the need for a mental health professional.[484] An online, self-guided version of the program has also been developed[485], which may be particularly beneficial for homebound seniors. This online program appears to reduce loneliness over time[486], but more research is needed using a control group.

Whether group-based or self-guided, programs that do not rely on clinical staff may be preferable for lonely people because the use of clinicians could inadvertently pathologize loneliness, thus reinforcing stigma. As discussed in the literature review, although mental illness is both a risk factor for, and outcome of, chronic loneliness, it is not a mental illness in and of itself, except perhaps in cases where social cognition has become severely distorted. Indeed, even mentally healthy people could develop a "lonely social cognition" if they find themselves in unfortunate circumstances (e.g., they become homebound because of chronic illness or permanent disability). For severe cases, especially those where there is a co-occurring psychiatric disorder, clients can be referred to psychotherapy as appropriate. However, because such referrals might be refused initially, it would be important to follow up with the client on a consistent basis.

[481] Martina & Stevens, 2006
[482] Theeke & Mallow, 2015
[483] Theeke et al., 2016; see Käll et al. (2019) for another CBT intervention
[484] Stevens, 2001
[485] Bouwman et al., 2017
[486] Bouwman et al., 2017; see also Käll et al. (2019)

Unconventional Interventions for Perpetually Isolated Seniors

Most interventions are based on an assumption that does not apply to all lonely or isolated people: that these problems can be resolved once social contact is restored or maladaptive social cognition is corrected. This ignores the reality that some people live in environments where prospects for social contact may be severely curtailed (e.g., remote areas, penitentiaries, isolation units, or care facilities that marginalize sexual minorities) and for whom social-cognitive interventions would therefore have limited impact.

With this in mind, it may be worth considering interventions that do not rely on social contact or correcting social cognition, but instead rely on alternative resources available even to the most severely isolated people.[487] These include mindfulness[488], reminiscence[489], the development of personal meaning,[490] and pet therapy.[491] Because these approaches are less cognitively demanding, they may be particularly suitable for people with cognitive impairment. A more unorthodox approach is the development of parasocial relationships, which are bonds formed with fictional characters and media figures[492], avatars in virtual reality settings (e.g., Second Life[493]), and even lifelike robots.[494] This approach is based on anecdotal observations that have now been confirmed empirically: in the absence of human contact, people may attempt to forge bonds with whatever nonliving substitutes are available.[495] For more information on the use of these and other technologies, see Recommendation #16.

---

[487] Elmer, 2015

[488] Mindfulness involves focusing on the present moment and learning to calmly acknowledge and accept loneliness without judgment. This may help people become less self-critical and self-conscious about being lonely and thus more open to interacting with others (Creswell et al., 2012; Lindsay et al., 2019).

[489] Reminiscence, either individually or in group settings, involves recall and discussion of past activities, events, and experiences. One study with institutionalized seniors suggests it may help reduce loneliness, but more research is needed (Chiang et al., 2010). In qualitiative research, some seniors report that they cope with isolation and loneliness by thinking about past relationships (Graneheim & Lundman, 2010; Kirkevold et al., 2012; Theeke et al., 2015).

[490] Severely lonely people report lack of a meaningful life as one possible cause for their loneliness (Savikko et al., 2005). Developing a greater sense of personal meaning, including ascribing meaning to loneliness itself, has also been cited as a way of preventing or coping with loneliness, as has spirituality and religious faith/activity (Ciobanu & Fokkema, 2017; Elmer, 2018; Graneheim & Lundman, 2010; McInnis & White, 2001; Roos & Klopper, 2010; Theeke et al., 2015; Wong, 2015).

[491] Empirical findings on this topic are complex. For example, longitudinal data from Pikhartova et al. (2014) suggest that pet ownership may be both a response to loneliness (i.e., a coping mechanism) as well as potential pathway out of it. These data also suggest that the relationship between pet ownership and loneliness is stronger for women compared to men. To the extent that pet ownership may help reduce loneliness, consideration should be given to policies that enable seniors—especially those in rental accommodations—to live with their pets.

[492] Hartmann, 2016; Jonason, Webster, & Lindsey, 2008; Wang, Fink, & Cai, 2008

[493] https://www.secondlife.com

[494] Howard, 2017; Liberatore & MacDonald, 2016; Robinson et al., 2013; Tarantola, 2017

[495] Bartz et al., 2016; Epley, Waytz, & Cacioppo, 2007; Epley, Akalis, Waytz, & Cacioppo, 2008

Barrier Solutions

Sector: Government

There are many barriers to social participation that can increase isolation and loneliness.[496] In Vancouver, many of these involve the built environment. Although the Healthy City Strategy and Age-Friendly Action Plan emphasize the need for safe and accessible streets, parks, and housing, there continue to be deficiencies in these areas.

The Seniors' Advisory Committee and City Council have passed several motions reiterating the need to address these deficiencies[497]; however, expediting solution-oriented actions aimed at reducing these barriers is essential. This need is underscored by a recent study from Sweden: the relationship between seniors' functional limitations and loneliness declined after officials made the built environment more accessible.[498]

The following are some new and specific recommendations that the City of Vancouver should consider in order to reduce barriers in the built environment.

Recommendation 11: Improve the safety and walkability of streets and neighbourhoods.

Time Frame: Short-to-Medium-term

Suggested Lead: City of Vancouver Engineering Services; Vancouver Board of Parks and Recreation; TransLink

Suggested Partners: SFU Department of Gerontology; Canada Post

People who live in safe, walkable neighbourhoods are more likely to be socially involved, to know their neighbours, to have a stronger sense of community belonging, and to be politically active.[499] To improve walkability and meet the City's objective to increase residents' sense of safety by 10%, the following suggestions are offered. To help direct resources where they are needed most, these suggestions should be prioritized for areas where residents are at high risk for isolation or loneliness.

---

[496] National Seniors Council, 2017

[497] Regarding street lighting: http://www.vancouverseniorsadvisory.ca/2014/09/improvements-street-lighting. Regarding public washrooms: http://www.vancouverseniorsadvisory.ca/2017/10/requesting-public-washrooms-skytrain-broadway-extension

[498] Dahlberg, Agahi, & Lennartsson, 2018. For a contradictory finding in the Netherlands, see Honigh-de Vlaming et al., 2014.

[499] Kelly, 2012; Leyden, 2003; Vancouver Coastal Health, 2018. Causality is uncertain; it may be that these neighbourhoods attract people with higher incomes, who also tend to be more socially engaged.

- Given research showing that incontinence is a risk factor for isolation and loneliness[500], install additional accessible public washrooms in high-traffic areas and parks.[501] In addition, lobby TransLink to install public washrooms at all SkyTrain stations and, in the interim, work with TransLink to inform seniors that washrooms are available for them if they ask SkyTrain attendants. In addition, consider creating a website or mobile app to help residents locate accessible washrooms, parking spots, and other amenities. Examples include the City of Peterborough's Accessible Resource Maps[502], the Great British Public Toilet Map[503], and the new parking feature[504] on Google maps that allows drivers to estimate how easy it will be to find a parking spot at their destination.
- Given that falls appear to be a risk factor for loneliness and feelings of social exclusion[505], ensure that there are a sufficient number of sidewalks and that they are even, wide, uncluttered, shaded by trees (where possible), and unencumbered by shrubbery or low-hanging branches. Also ensure that streets are cleared of ice, snow, and wet leaves in a timely manner.
- To help seniors clear snow from their property, expand the City's Snow Angel program[506] or provide grants so they can hire others for this purpose.[507]
- Install additional street lights in dark areas, preferably lighting that is directed towards sidewalks and not just the street. In addition, encourage Business Improvement Associations to leave some storefronts lit at night, especially in areas with inadequate street lighting. Not only do lit storefronts improve real and perceived safety, but they also draw more people into public spaces, further improving safety and facilitating social interaction.[508]
- Ensure that there is good way-finding (e.g., large, legible, brightly-lit street signs and transit station markers). This is especially important for people with vision problems and cognitive impairment.
- Ensure that timing of crosswalk signals leaves enough time for seniors to cross streets, especially wide ones.
- Consider a pilot project with Canada Post in which postal carriers conduct walking audits of their routes and use mobile devices to identify potential safety

[500] Ramage-Morin & Gilmour, 2013
[501] It may possible to work with the business community in this regard (e.g., the City could consider subsidizing businesses to maintain publicly accessible washrooms in their establishments).
[502] https://www.peterborough.ca/Living/Accessibility_News/Accessible_Resource_Maps.htm
[503] https://greatbritishpublictoiletmap.rca.ac.uk/
[504] https://mashable.com/2017/08/29/google-parking-difficulty-find-parking-feature/
[505] Hajek & Köning, 2017; Taube et al., 2016
[506] http://vancouver.ca/streets-transportation/snow-angel.aspx
[507] Paikin, 2018
[508] Kelly, 2012

hazards, including poor sidewalk conditions.[509] Anything identified as a safety hazard for postal carriers is likely a safety hazard for seniors, too.

- Examine locations where additional street furniture (e.g., benches) can be installed. Well-placed, well-designed, and comfortable street furniture allows seniors to rest during walks, facilitates social interaction, and attracts more pedestrians, especially if it is varied and located near interesting features like fountains or public art.[510] In addition, businesses should be incentivized to provide public seating areas, even for people who are not customers.[511]
- Preserve existing public plazas and meeting spots.
- Discourage property owners from fencing off or restricting seating areas and plazas that were originally intended for public use. Although owners may do this to deter vandalism, it makes neighbourhoods less inviting and walkable.[512]
- Reconsider permitting small-scale grocery stores and other small businesses in residential areas like the West End, which can enhance a sense of community belonging, create a more varied and inviting streetscape, and increase chance encounters between neighbours.[513]

Recommendation 12: Improve the attractiveness, safety, and accessibility of local parks and other green spaces.

Time Frame: Medium-term

Suggested Lead: Vancouver Board of Parks and Recreation

Suggested Partners: Local landscape architects

A major target of the City's Healthy City Strategy is that all residents will live within a five-minute walk of a park, greenway, or other green space. For many people, safe and attractive parks and green spaces can be a great place to meet and socialize. They are also a low-stakes venue for those who wish to be around people but are not yet comfortable enough to interact with them. Parks and green spaces are also ideal settings for pleasurable solitude and quiet contemplation. Unfortunately, not all parks and green spaces are inviting. A review of the literature and consideration of comments during the community consultations revealed several features our local parks and green

[509] Havelaar, 2016b; United States Postal Service, Office of the Inspector General, 2016
[510] Mehta, 2007
[511] Mehta, 2007, 2009
[512] Gold, 2018
[513] Kelly, 2012

spaces that could be improved to attract more people and provide opportunities for chance encounters:

- Improve lighting to reduce tripping hazards and increase perceived safety.
- Ensure that parks are free of litter.
- Add additional features to increase visual interest and create focal points that naturally attract people.[514] Examples include varied furniture; brightly-coloured flowers and plants; water features; garden paths and labyrinths; creative shade structures; and "social furniture" like chess boards, ping-pong tables, and urban exercise equipment.
- Pay careful attention to the arrangement of seating. Research shows people prefer congregating at the edges of public spaces because it makes them feel safe and gives them a full view of their surroundings.[515] Seating should be dispersed and not be concentrated in the middle of a park because it can make people feel vulnerable and exposed. Moreover, to encourage social interaction, seats should face each other.
- Consider the creation of additional mini-parks and parklets, which tend to be more inviting, intimate, and conducive to social interaction compared to larger green spaces.[516]
- Include more space and infrastructure for the performing arts (e.g., music bandshells, electrical outlets for audio equipment).
- Given the potential social benefits of gardening and other nature activities[517], protect existing community gardens consider installing more.
- To help identify gaps and barriers in parks and green spaces, consider following the example of London, Ontario, in which local residents conduct age-friendly audits using a checklist that considers many of the features listed in this recommendation.[518] These audits can be supplemented by observational studies to determine how green spaces are being used—or not used—in order to determine how to optimize them for social interaction.

[514] Whyte, 1980
[515] Kelly, 2012; Whyte, 1980
[516] Kelly, 2012
[517] Tse, 2010. Although this was a study of an indoor gardening program for nursing home residents, results suggest that the social element of gardening (e.g., chatting with other residents while planting flowers) may have been beneficial in reducing loneliness. Note that this is just one study and the sample size was small, so more research is needed on the effectiveness of this type of program.
[518] See Peterborough Council on Aging, 2017, p. 34

Recommendation 13: Encourage the inclusion of "sociable design" features in residential buildings.

Time Frame: Medium-term

Suggested Lead: City of Vancouver Housing Department

Suggested Partners: City of Vancouver: Social Policy & Projects Division and Urban Design Panel; SFU Department of Gerontology; Architectural Institute of British Columbia; Urban Design Institute

In his book *The Happy City*[519], urbanist Charles Montgomery describes how architectural design features of residential buildings, especially high-rises, can facilitate or hinder social interaction. A large number of Vancouver seniors live in apartment buildings and condominiums, and many spend a great deal of time indoors during the rainy months. It is important, therefore, that the City encourage developers to incorporate more "sociable design" features into their buildings, especially in locations at high risk for social isolation or loneliness. The following suggestions are offered:

- Add new design guidelines to the Building By-law. Guidelines could focus on the inclusion of both formal and informal common areas[520], such as rooftop gardens courtyards, barbeque spots, play areas for both children and seniors (preferably in central areas viewable by all units), and comfortable seating in lobbies and outside front doors.

  Guidelines could also focus on the specific location of certain features. For example, to increase chance encounters between neighbours, developers could be encouraged to locate essential amenities like mailboxes and laundry facilities in the same area.

  To encourage residents to linger in common areas, they could include attractive features like artwork, fountains, plants, and comfortable seating in central locations and along high-traffic routes (e.g., hallways).[521]

  Other "sociable design" features include exterior corridors, intentional spaces (e.g., bike wash, pet wash, workshops), and onsite businesses like coffee

[519] Montgomery, 2013, https://thehappycity.com/
[520] In Vancouver, about half of people living in condos or apartment buildings do not have a common area in which to socialize with neighbours (Vancouver Foundation, 2017).
[521] Bruni, 2017; Huang, 2006

shops.[522] Including WiFi hotspots in common areas is another option to draw tenants into common areas.[523]

These suggestions build on an earlier recommendation in the Age-Friendly Action Plan to include more accessibility guidelines in the Building By-law to allow seniors to "age in place." Given that supportive social environments are a key ingredient to aging in place, design guidelines that encourage social interaction should be considered on par with accessibility guidelines and thus be considered for inclusion in the By-law.

Design guidelines that encourage social interaction should be considered on par with physical accessibility guidelines.

- In place of codifying guidelines, encourage the Urban Design Panel to request consideration of these features when reviewing new developments.
- Alternatively, consider providing concessions to developers who incorporate these design features, as well as tax incentives for property owners who update their buildings to encourage social interaction (e.g., building recreation rooms or communal dining areas).
- Provide training sessions to the design community about the role of design features in promoting social connections, and introduce them to successful examples[524] of residential buildings that include these features. This could be accomplished in partnership with Mr. Montgomery's *Happy City Project*; the Architectural Institute of British Columbia; the Urban Design Institute; and the Department of Gerontology at Simon Fraser University, which has a program on aging and the built environment.

Although design features can play an important role in improving sociability in residential buildings[525], architects and developers should keep one important point in mind: there must be a balance between residents' desires for interaction and their need for privacy. As Kelly cautions, "overt attempts to engineer social interaction may backfire as people often withdraw when they feel their privacy is under threat."[526]

[522] Tavakoli, 2017
[523] Bruni, 2017
[524] Tavakoli et al., 2017
[525] van der Ryn, 2013
[526] Kelly, 2012, p. 10

Recommendation 14: Enhance transit options and the transit experience for seniors.

Time Frame: Short-term

Suggested Lead: City of Vancouver Transportation Planning; TransLink

As discussed in the literature review and by participants in the community consultations, lack of affordable, accessible, and timely transit is a risk factor for social isolation and loneliness. Poor transit impedes the ability of seniors to leave their homes, to meet other people, and to participate in social programs. Given the long lead times, large-scale improvements to transit are unlikely to happen in the short-term, but three smaller changes can be undertaken now:

- Increase the presence of SkyTrain attendants at stations and encourage them to adopt more of a greeting and information role rather than an enforcement role.
- In addition to public washrooms, install more seating at transit nodes, especially SkyTrain stations, so seniors can rest and talk to other passengers while waiting. As well, encourage station attendants to linger in these areas; not only can this increase perceived safety—a key target of the Healthy City Strategy—but it can facilitate social interaction because people are more likely to converse with fellow passengers when platform attendants are present.[527] Moreover, SkyTrain attendants can assist passengers who need to access washrooms.
- Work with the provincial government to implement ride-share services like Uber and Lyft. These services could provide another quick, affordable transit option for seniors. Existing services like HandyDART must be booked in advance; while this is fine for medical appointments, it can be inconvenient for spontaneous social visits. Ride-share services, on the other hand, can be booked immediately, letting seniors travel as they please.

  More importantly, ride-share drivers are usually quite sociable and strike up conversations with their customers. These types of small, social interactions with strangers can increase positive affect[528], which in turn may shift isolated and lonely people's negative social perceptions and help them feel more comfortable around people.[529] For seniors who do not use smartphones, they can still take advantage of ride-share by using services that can book rides on their behalf

[527] Kelly, 2012
[528] Sandstrom & Dunn, 2014. *Ignoring* strangers has the opposite effect (Wesselmann et al., 2012). Sometimes people are reluctant to engage in small interactions with strangers because they think that the other person will not be interested in communicating. In fact, research suggests this is not true and that we actually tend to underestimate others' interest in communicating (Epley & Schroeder, 2014).
[529] Cacioppo & Patrick, 2008

(e.g., Common Courtesy and GoGoGrandparent[530]). Preliminary research suggests the feasibility of using these services to supplement other modes of transportation.[531] The American Association of Retired Persons (AARP) is working with Lyft to study whether these apps can improve seniors' well-being.[532]

Recommendation 15: Prevent isolation and loneliness among ethnic minority seniors by protecting ethnic neighbourhoods; ensuring that local services are culturally appropriate; providing relevant information about government and social programs in many languages; and facilitating intergenerational living arrangements.

Time Frame: Medium-term

Suggested Lead: City of Vancouver: Social Policy & Projects Division, Housing Department, and Cultural Communities Advisory Committee

Ethnic minority seniors are at increased risk for isolation and loneliness compared to the overall population[533], although there is variation across subgroups. For example, those whose mother tongue or culture is significantly different from the predominant culture are particularly at risk[534], as are those who come from a collectivistic rather than individualistic culture.[535] Additional risk factors include intergenerational tensions with adult children[536]; conflicts with family members about returning to their home country; absence of ethnic enclaves with culturally appropriate services; and lack of information about immigration/settlement issues and government and social programs.[537]

Considering these risk factors, the following recommendations are offered to help reduce or prevent isolation and loneliness among ethnic seniors:

- Steps should be taken to preserve ethnic-enclave neighbourhoods like Chinatown, which can help foster relationships between seniors who share a

[530] Green, 2017; Johnson, 2018
[531] Kaufman, Smith, O'Connell, & Marulli, 2016; Leistner & Steiner, 2017. See also Rieland, 2017.
[532] Marsh Ryerson, 2018
[533] National Seniors Council, 2017
[534] de Jong Gierveld, van der Pas, & Keating, 2015
[535] This may be due to cultural differences in expectations for social contact and, therefore, greater likelihood of becoming disappointed when the preferred degree/quality of social contact is absent. See: Dykstra, 2009; Fokkema, de Jong Gierveld, & Dysktra, 2012; Goodwin, Cook, & Yung, 2001; Jylha & Jokela, 1990; Lykes & Kemmelmeier, 2014; van Staden & Coetzee, 2010.
[536] Immigrant seniors and their Westernized adult children may have different values and expectations regarding the amount of time that should be spent together (Ng & Northcott, 2015).
[537] Syed et al., 2017

common cultural and migration history[538] and which provide access to culturally-specific organizations, professionals, and businesses (e.g., ethnic grocery stores, pharmacies, and beauty salons).

- At the same time, steps should be taken to help immigrant seniors feel more integrated with the wider community (e.g., organizing multicultural festivals or providing English language classes).[539] In an intriguing study of older immigrants in Canada, de Jong Gierveld and colleagues found that having a network of people who speak one's native language is associated with *increased* loneliness, perhaps because these networks reinforce longing for one's home country and culture, or because these networks are insular and preclude integration with the wider community.[540]

- The effects of gentrification on ethnic neighbourhoods should be actively monitored to ensure that affordable space is available for ethnic minority residents, businesses, and not-for-profit organizations. When new developments are planned for these neighbourhoods, Council should consider setting aside space for cultural venues, and the City should offer reduced rent for the use of this space by people living and working in these neighbourhoods.

- The City should consider partnering with other levels of government and organizations that serve ethnic seniors in order to provide up-to-date information about government and social programs, as well as immigration and settlement issues. This information can reduce the likelihood that ethnic minority seniors become socially isolated and overly dependent on family members to meet all of their needs.[541] This is of particular importance because loneliness and social isolation are risk factors for elder abuse.[542] Indeed, ethnic minority seniors who are unaware of services or their legal rights could be at risk of control by abusive family members. As mentioned frequently in the community consultations, this information should be provided in multiple languages.

- Participants in the community consultations frequently highlighted the value of intergenerational connections and programs. Given that seniors from some countries are more accustomed to intergenerational living arrangements, the City could encourage and provide assistance to older adults to share their homes with younger people who can provide support and companionship in exchange for free or discounted rent. This type of intergenerational contact could alleviate

[538] A sense of belonging to one's own ethnic group provides some protection against loneliness (Klok et al. (2017).
[539] Givetash, 2018b
[540] de Jong Gierveld, van der Pas, & Keating, 2015
[541] Tam & Neysmith, 2006
[542] Acierno et al., 2010; Dong et al., 2007; Grafstrom, Nordberg, & Winblad, 1993; Lachs et al., 1994; Phillips, 1983; Truchon, 2011

isolation and loneliness[543], allow older adults to remain in their communities, and provide younger people with affordable accommodation in an increasingly expensive housing market. Moreover, pairing together people of different ethnic backgrounds could improve cultural awareness and respect. The City or a not-for-profit organization could facilitate these arrangements with the creation of a website or other mechanism that helps screen and match people who would be willing to live together. The West End Seniors' Network is currently exploring the feasibility of a program to screen and match seniors who wish to co-reside; if successful, strategies from this program could be applied to a similar intergenerational program.

- In addition to private residential dwellings, the City could encourage or help facilitate arrangements in which younger students reside in nursing homes free of charge (or at affordable rents) in exchange for spending time with seniors. This type of arrangement is found in several European cities[544] and has recently been piloted in London, Ontario.[545]

Sectors: Not-for-Profit, Individuals, Families/Caregivers

Recommendation 16: Empower seniors and their families to use technology, including online social networking

Time Frame: Short-term

Suggested Lead: Vancouver Public Library

Suggested Partners: Vancouver School Board; UBC eHealth Strategy Office (Dr. Kendall Ho); seniors' centres; community centres

The best way to prevent social isolation and loneliness is to be proactive—to take steps now to ensure that one has an adequate social network. This is also the best way to plan for an emergency or disaster. It is no surprise that during the Chicago heatwave of 1995 and the European heatwave of 2003, people with stronger social support networks had a greater chance of survival.[546] This is why one of the key targets in the Healthy City Strategy is for all residents to have at least four people they can rely on for support in a time of need. This City also supports an earthquake preparedness program that can only be successful if people are willing and prepared to take care of each other in the event of such a disaster.

[543] See Miller, 2015
[544] Reed, 2015
[545] Ghonaim, 2017
[546] Keller, 2015; Klineberg, 1995; Pekovic et al., 2007

But building and maintaining a strong social network can be challenging for many people.[547] Fortunately, technology could make this easier.[548]

Potential Benefits of Online Social Networking

While concerns have been raised in the popular press about the role of online social networking in promoting loneliness[549], and while some research has suggested that social networking has a small but statistically significant negative effect on mental well-being[550], these technologies may be useful for those with very restricted social networks or who have difficulty maintaining social contact because of mobility challenges or distance.[551] Social networking can also be used to forge new relationships based on shared hobbies and common interests (e.g., Meetup.com). In addition, these technologies can be invaluable during emergencies and after disasters. Facebook, for example, has a Safety Check[552] feature that alerts friends and family if a friend or family member is safe after a disaster. It also allows people in the immediate vicinity to offer help or supplies to those in need (e.g., food, shelter).

Encouraging seniors to use online social networking would align well with Vancouver's goal to become a "resilient city."[553] However, while older adults are more digitally connected than ever[554] and are the fastest growing group of Internet and social media users[555], and while their attitudes toward online social networking are generally positive[556], some seniors may have misconceptions about technology or lack the skills to make the best use of it.

To address this issue, it is recommended that the Vancouver Public Library offer Internet and social networking classes to older adults. Following successful examples in the United States, seniors could be enticed to participate by receiving free or rented tablets in exchange for joining the classes and committing to use their tablet to build relationships with friends and family.[557] Some participants in the community

---

[547] This may be especially challenging for men, who often base much of their social network around co-workers and who let their other relationships lapse with age (Baker, 2017). As they retire, they may find their social network quite small, leaving them to rely on their spouse for emotional support.
[548] E.g., Fokkema & Knipscheer, 2007; Sum et al., 2008; Tsai & Tsai, 2011. For reviews, see Campos et al., 2016; Chipps, Jarvis, & Ramlall, 2017; Choi, Kong, & Jung, 2012; Cotton et al., 2013; Morris et al., 2014
[549] Konnikova, 2013; Marche, 2012; Turkle, 2011
[550] Shakya & Christakis, 2017
[551] Gardiner et al., 2016; Wong, 2015
[552] https://www.facebook.com/about/safetycheck/
[553] https://www.100resilientcities.org/
[554] Anderson & Perrin, 2017
[555] Doyle & Goldingay, 2012; Pew Internet, 2017
[556] Lennon & Curran, 2012
[557] Kamber, 2018

consultations recommended that lessons be taught by students from local schools (in exchange for course credit), thus providing a potentially valuable intergenerational experience.[558]

As with all technologies, online social networking is a tool, and its usefulness depends on how it is used.[559] Active rather than passive use should be emphasized during training sessions, as research suggests that active use (e.g., using Facebook to keep in touch with family or Meetup.com to find new social groups) is associated with *decreased* loneliness whereas passive use (e.g., "lurking" or merely looking at photographs and clicking "like") is associated with *increased* loneliness.[560] In addition, seniors should be reminded that these technologies can make them vulnerable to abuse (e.g., financial fraud), so they should be taught skills to help avoid this.

Like all technologies, social media is a tool; its usefulness depends upon how it is used.

Even older adults with cognitive impairment and physical disabilities (e.g., poor dexterity) can enjoy the benefits of online social networking. Thanks to researchers at the University of Toronto TAGLab[561], there is a non-language-specific Android application called *InTouch* that allows seniors to communicate with friends and family without typing (e.g., they can say hello simply by waving their hand).[562] Researchers and software developers should be encouraged to continue innovation in this area.

[558] A caveat regarding intergenerational programs: they are unlikely to provide any benefit if the underlying activity is not personally meaningful to all participants (Galbraith, Larkin, Moorhouse, & Oomen, 2015; Herrmann et al., 2005).
[559] Cacioppo, 2012, cited in Marche, 2012; Nowland et al., 2018
[560] For a review, see Nowland, Necka, & Cacioppo, 2018. As the authors note, causality is likely bidirectional. Passive use of social technology appears to increase the risk for loneliness, but people who are lonely in the first place not only prefer using social technology to communicate, they also tend to use it passively, similar to the way they interact with others offline. Precisely why passive social media use is associated with loneliness is not clear, but may reflect a tendency to engage in negative social comparison (see Feinstein et al., 2013, for a discussion of this possibility in the context of depression).
[561] https://taglab.utoronto.ca
[562] Neves et al., 2015

Other Technologies

In addition to online social networking, exciting advances in voice-controlled technology like Amazon's *Alexa* and Google's *Home Assistant* may provide benefits to isolated and lonely seniors. Such devices could be programmed to provide gentle reminders to engage in social activities, such as calling a friend or going to the store. Although not a substitute for real human interaction, these devices can provide positive feedback and elicit positive emotions through interactive dialogue. For seniors who have become socially anxious due to prolonged isolation, these devices could be used to develop greater social comfort and to practice social skills (e.g., speaking clearly and audibly; keeping a conversation going by asking questions). In group settings, seniors can bond with one another as they discover new uses for these devices. The American Association of Retired Persons is currently conducting a pilot study of the effectiveness of this technology to delay or reduce isolation and its consequences.[563]

As mentioned earlier, the use of robots may also hold promise, including lifelike robotic pets for those who cannot keep pets in the home; these have proven especially popular in countries like Japan, with rapidly growing populations of isolated and lonely seniors.[564] Technology can also be used to deliver specific online interventions, such as psychotherapy and the friendship enrichment program described on page 95.

Those who care for seniors can also benefit from technology. For example, the Howz app uses sensors to monitor a senior's activity (e.g., how often the person stays at home or opens the door to receive visitors) and then alerts trusted friends or relatives if there is any unusual activity that might indicate social isolation.[565] Another example is TYZE[566], a Canadian social networking site that allows a group of friends, family members, or neighbours to coordinate care around an older adult, including scheduling visits, medical appointments, and meals. This is certainly an area ripe for future research.[567]

Websites and apps that facilitate neighbourhood sharing of tools and services could also be useful in creating social connections (in addition to saving people money). Indeed, asking a neighbour for a small favor (e.g., to borrow a tool) can be enough to "break the ice" and possibly open the door for a new friendship or relationship.[568] Tavakoli examines a variety of websites and apps that could be used for this purpose.[569]

---

[563] Ianzito, 2018; Marsh Ryerson, 2018
[564] Howard, 2017; Liberatore & MacDonald, 2016; Robinson et al., 2013; Tarantola, 2017
[565] https://www.howz.com/
[566] https://tyze.com/
[567] Campos et al., 2016
[568] CBC Radio, 2019; Olds, Schwartz, & Webster, 1996
[569] Tavakoli, 2017

Older adults appear to be receptive to the use of social technology, especially if they feel that it will allow them to age independently[570] and if they are reassured about privacy issues (e.g., being reminded that *Alexa* is not recording their conversations). For seniors who are wary of technology, it may be helpful for more technologically adept seniors to provide education, encouragement, and support.[571]

Unfortunately, the sheer number of social technologies available can be overwhelming. To address this problem, it is recommended that the City partner with the UBC eHealth Strategy Office[572] and Dr. Kendall Ho to provide free public lectures on the best-available healthcare apps and websites for seniors and caregivers.

Given the many potential benefits of Internet-based technologies, efforts should also be made to ensure that all seniors have access to fast and affordable broadband service.[573] For those living in residential towers, consideration should be given to including free WiFi hotspots in common areas. Not only would this reduce the high cost of broadband service for seniors, but it could also draw tenants to common areas and thus spark chance encounters between neighbours (so long as they remember to took away from their gadgets from time to time!).[574]

Sector: Business

Recommendation 17: Work with the business community to help address isolation and loneliness in their establishments and in their neighbourhoods.

Time Frame: Short-term

Suggested Lead: City of Vancouver

Suggested Partners: Business Improvement Associations

The business community has not traditionally been viewed as playing a role in tackling isolation and loneliness[575], even though it may be in a unique position to do precisely that. Businesses already make a valuable contribution by sponsoring and co-hosting a variety of social events throughout the city, but they may wish to consider additional roles.

---

[570] Czaja, 2018
[571] Ianzito, 2018
[572] https://ehealth.med.ubc.ca/
[573] Czaja, 2018
[574] Bruni, 2017
[575] E.g., Kantar Public, 2016

In particular, it is recommended that the City partner with the 22 Business Improvement Associations to examine how their members' businesses can support their customers' and employees' social well-being. The following are some suggestions:

- Mall and storeowners could consider how security practices may deter seniors from socializing (e.g., security guards discouraging people from "loitering" in shopping malls).
- Grocery stores, retailers, and banks could remind cashiers and tellers of the need to know their customers and to better identify and communicate with those who may be isolated or lonely. For many of these customers, chatting with a clerk is their only social contact all week.[576] Research suggests that even small, positive social exchanges between service providers and customers (e.g., smiling, making eye contact, having a brief conversation) can improve momentary well-being and sense of belonging.[577] For isolated and lonely people, these small, positive exchanges could challenge their misperception that people are threatening, and encourage them to be more prosocial, thus helping break the vicious cycle of isolation and loneliness.[578]

Even small, positive social exchanges between service providers and customers can improve momentary well-being and increase sense of belonging.

- Since many seniors go to the bank or grocery store for the express purpose of being around other people, these businesses may wish to designate certain parts of their establishments as areas for socializing (e.g., free "coffee corners") or hold regularly scheduled "tea times" for their senior customers.[579]
- Following the example of Tesco in the United Kingdom, grocery stores could experiment with "relaxed check-out lanes" for seniors who need more time because of cognitive impairments or simply because they would like to chat with a cashier.[580] Given these potential social benefits, businesses may wish to reconsider how many checkout lanes they plan to replace with self-checkout machines.

---

[576] Kantar Public, 2016.
[577] Sandstrom & Dunn, 2014. Even interactions between total strangers (on a train or in a waiting room) can have positive emotional effects (Epley & Schroeder, 2014), as can merely being in the presence of other people, given the tendency for human beings to regulate one another's behaviour and emotions (Cacioppo & Hawkley, 2008).
[578] Cacioppo & Patrick, 2008
[579] Paikin, 2018
[580] BBC, 2017

- As people are more likely to access services that are near their homes or where they run errands[581], local businesses could function as "community hubs" by advertising social events and services in their neighbourhoods.
- Given the difficulty of finding safe, accessible, and sufficiently large space for community events like lectures or meetings, businesses may wish to consider renting their facilities (e.g., boardrooms) to seniors' groups at a discounted rate.
- Given that loneliness in the workplace can have a negative impact on employees' work performance and the way they treat people around them (including customers),[582] employers should create a climate that facilitates social connectedness. Examples include promoting a culture of inclusion and empathy; providing sufficient time and space for social interaction; and even providing small gestures of support and encouragement.[583] Aside from improving co-operation and productivity[584], fostering social connectedness in the workplace greatly benefits the large number of employees whose primary source of social contact may be their work colleagues. Of course, given the importance of family relationships in preventing loneliness, employers should also take steps to ensure that employees have sufficient time to tend to their relationships *outside* of the workplace.[585]
- Employers should consider identifying employees at risk for, or currently suffering from, isolation and loneliness, and offering referrals to employee assistance programs if warranted.
- Employers should work with employees to formulate Wellness Action Plans (WAPs). These are personalized plans that help managers and employees to identify factors that promote and hinder mental health in the workplace and that outline steps to take when a mental health problem arises. The Mind Charity in the United Kingdom offers WAP guides for both managers and employees.[586]
- Finally, employers should consider offering retirement planning sessions for employees, emphasizing the need to build and preserve their social networks early on so that they can remain socially connected after retirement. This would be especially important for men, whose primary social network outside the home is often the workplace.[587]

---

[581] Kantar Public, 2016
[582] Ayazlar & Guzel, 2014; Jacobs, 2017; Murthy, 2017; Nordstom, 2017; Totaljobs, 2018
[583] Seppala & King, 2017
[584] Seppala & King, 2017
[585] Waytz, 2017
[586] https://www.mind.org.uk/workplace/mental-health-at-work/taking-care-of-your-staff/employer-resources/wellness-action-plan-download/
[587] Baker, 2017

Public Education

Although social isolation and loneliness have been receiving significant attention in the mainstream media, many people in the general public—including those who may be suffering from isolation or loneliness themselves—may not know enough about these problems. In order to combat social isolation and loneliness, it is imperative that the general public be aware of the signs, causes, and serious consequences of isolation and loneliness, as well as how they can help themselves, their friends, their family members, and their neighbours to overcome them. This type of broad-based approach is an important complement to more targeted approaches, such as interventions for specific groups of people at risk for isolation and loneliness. To this end, the following recommendations are offered.

Sectors: Government, Individuals

Recommendation 18: Launch a public education campaign about social isolation and loneliness, including a "one-stop shop" website for information and resources about these issues.

Time Frame: Short-term

Suggested Lead: City of Vancouver Corporate Communications

Suggested Partners: BC Psychogeriatric Association; Heretohelp.bc.ca; Vancouver Public Library Media Lab; Vancouver Board of Parks and Recreation; local experts on isolation and loneliness

A campaign should be launched to educate the public about isolation and loneliness, following the example of similar campaigns in the Netherlands[588] and the United States.[589] The campaign could occur during a special week (e.g., National Seniors' Week in BC) or throughout the year (considering that isolation and loneliness are not specific to seniors). The campaign could focus on several issues: the importance of social connections; the negative health impact of isolation and loneliness; risk factors and warning signs; and how to combat the stigma surrounding these problems. People should be encouraged to have discussions about these topics with friends and family

[588] Honigh-de Vlaming et al., 2013
[589] AARP Foundation Connect2Affect (https://connect2affect.org/); Boston College Talks Aging (https://www.bc.edu/centers/ioa/videos/social-isolation.html)

and to share the information from the campaign with others. Special attention should be placed on addressing various myths surrounding isolation and loneliness:

- **Myth**: Isolation and loneliness are the same.
- **Myth**: Isolation and loneliness are merely unpleasant emotional states without much effect on physical and mental health.
- **Myth**: Isolation and loneliness are easily overcome by simply telling someone to "make more friends."
- **Myth**: Isolation and loneliness affect seniors only.[590]
- **Myth**: Isolation and loneliness are inevitable consequences of aging and not much can be done to change this.

Given that many people report not knowing how to cope with isolation or loneliness[591], the campaign should also offer suggestions for coping and making social connections. Independent Age UK recently published a guide for seniors that contains this type of information[592], as have the Dutch Coalition Against Loneliness[593] and the British charity, Mind.[594] Helpful tips have also been published in the popular press.[595]

On the next page are some self-tips drawn from these websites, the literature review, and the community consultations for the SILAS project. Following this list are some tips for people who wish to provide support to those who are isolated or lonely.[596] All of these can be included in proposed public education campaign.

[590] As discussed earlier, chronic isolation and loneliness can happen at any age, although there are some certain risk factors that are more common in later life. Describing these as universal phenomena rather than exclusively "seniors' issue" could reduce ageist stereotypes as well as the stigma of isolation and loneliness.
[591] In one survey, 15% of British seniors indicated that they did not know what steps to take when they feel lonely (Independent Age UK, 2016).
[592] https://www.independentage.org/sites/default/files/2016-11/Advice-Guide-If-youre-feeling-lonely.pdf
[593] https://www.eenzaam.nl/
[594] https://www.mind.org.uk/information-support/tips-for-everyday-living/loneliness/
[595] E.g., Latson, 2018
[596] Drawn from Cacioppo & Patrick, 2008; de Jong Gierveld & van Tilburg, 2007, cited in Expatica, 2007

Self-Help Tips for Public Education Campaign

- ✓ Remember that we all feel isolated or lonely from time to time. This is normal. It is a problem only when it is prolonged.
- ✓ Do not ignore loneliness. Just like thirst tells you that you need water, loneliness tells you that you need more (or better) social connections.
- ✓ Don't be afraid to admit you are lonely. Just talking about it can make you feel better.
- ✓ Prevention is easier than cure: build your support network now while you still can. And do not let existing relationships fade.
- ✓ Try to figure out the cause of your isolation/loneliness so you can determine the possible solution(s).
- ✓ Try to improve the quality of your existing relationships.
- ✓ Make a plan: create a regular schedule of social activities and stick with it, even if you do not feel like it.
- ✓ Isolation and loneliness can make you socially anxious, so start with small, "low-stakes" activities, even something as simple as greeting a cashier or sitting in a public space where you are not expected to talk to anyone (e.g., a park, cinema, or mall). This will help you gradually feel more comfortable and confident around people, and may even lead to chance encounters.
- ✓ If you are afraid to start a new activity on your own, ask if someone will accompany you the first few times.
- ✓ Take a risk and reach out to someone, even if not face-to-face (e.g., an email).
- ✓ Break the ice by asking a favor (e.g., to borrow something) or offering help.
- ✓ Meet others through activities that are meaningful and enjoyable; this will help you persevere when you feel like giving up.
- ✓ Pick activities where everyone is focused on a task and not expected to interact right away.
- ✓ Seek activities where you play a meaningful role in other people's lives.
- ✓ Focus on quality over quantity, but remember that a mix of strong and weak ties is ideal.
- ✓ Loneliness can make us mistrustful, critical, and rejecting, so check your assumptions and give others the benefit of the doubt.
- ✓ Try to make new relationships without expecting anything. As time passes, you may be pleasantly surprised that someone has become a good friend, or more!
- ✓ Reconsider your expectations. For example, is it reasonable to expect one person to be your sole source of support, or that friendships should be conflict-free?
- ✓ Although it can be scary, especially when you feel alone, try to create deeper bonds with people by slowly opening up more. Others will likely reciprocate.
- ✓ Ask your family doctor for a referral to a counselor. This might help you overcome the factors that led to your isolation/loneliness, or at least help you manage the effects of isolation/loneliness.
- ✓ Isolation and loneliness can affect your health, so practice self-care: eat well, exercise, and try to improve your sleep.
- ✓ Take charge: although others can help, you alone must decide to take steps to improve your relationships.
- ✓ Remember that not all isolation or loneliness can be solved. Sometimes the best you can do is to reduce it, tolerate it (e.g., using mindfulness), or minimize its impact on your health and mental well-being through self-care.

The campaign could involve mail-outs and social media ads targeted to high-risk individuals; loneliness heat maps would be invaluable in this regard. Radio ads, posters in transit stations, articles in non-English newspapers, and YouTube videos should also be considered. Since half of older adults indicate that television is their main source of company[597], television ads could be useful, too.

In line with the City of Vancouver's Healthy City Strategy, a key element of the education campaign should be to encourage all citizens to complete a card listing at least four[598] trusted people they can call in a time of need (i.e., their "personal convoy"). Of course, not everyone will be able to name four people, so gentle suggestions could be offered to help them build a support network. If possible, this support network should ideally comprise people of different ages.

Encouraging people to build a network may be difficult for those who are solitary by nature and happy with a small social network.[599] Yet, as discussed at the beginning of this report, social isolation may have an impact on health and longevity just like loneliness.[600] To encourage these people to expand their social network, it may be beneficial to remind them about the possible health risks of a small social network.[601]

Tips for Supporting an Isolated or Lonely Person

- ✓ Recognize that an isolated person may not necessarily feel lonely and need help.
- ✓ Remember that lonely people can be hard to identify because it is difficult to know how someone is feeling inside.
- ✓ Be patient and understanding. Loneliness can make people socially anxious and push others away.
- ✓ Avoid telling the person that they are "just depressed."
- ✓ Avoid telling the person to "join a club." They may interpret this as dismissive and may feel lost when thrown into a group.
- ✓ Be persistent: the person might repeatedly reject offers of friendship. Let them know that you are there if they change their mind. Eventually they may "open the door a crack" and feel comfortable enough to accept your support. Your persistence will also help challenge their assumption that people are unreliable.
- ✓ Avoid actions or language that may be perceived as pitying, patronizing, or infantilizing.

[597] Campaign to End Loneliness, December 2013
[598] Why four? Although having just one or two people to rely on in times of need is better than having no one, it is too much to expect that these people will be available all the time. Four is a more reasonable number.
[599] Newall & Menec, 2017
[600] E.g., Holt-Lunstad et al., 2015; Steptoe et al., 2013
[601] Newall & Menec, 2017

As suggested in the community consultations, the campaign should also encourage people to check in on elderly neighbours or others who might be homebound and have limited social contact. Although some people prefer to guard their privacy, many would appreciate this attention and feel good knowing that someone is thinking about them.

Taking inspiration from the websites of the Dutch Coalition Against Loneliness[602] and the British Campaign to End Loneliness[603], the City should also work various partners to create an accessible website with information about isolation and loneliness. This website, which should be in several languages, could include relevant articles, self-assessment tools, self-help resources, research, scientifically-validated interventions, and book/movie lists. Where appropriate, there should be a focus on local information. The website should link to the BC211 Redbook[604], a searchable online database of information about community, government, and social services in BC. As suggested in the community consultations, consideration should also be given to including an online discussion forum for seniors.

Ideally, website visits should be tracked to determine if people from certain areas are accessing it more often than others, thus providing a hint about rates of isolation or loneliness in those areas. Peak times for website use should also be monitored as this can provide clues about the times during which people might be most isolated or lonely[605]—information that can then be used to optimize the allocation or timing of services (e.g., adjusting business hours or staffing levels for social services or hotlines in the area). As always, privacy issues should be considered when collecting this type of data.

All of these public education materials should be shared widely. It may be fruitful to partner with the Province of British Columbia to distribute some of these materials to people who have recently applied for a death certificate, given that bereavement is a risk factor for isolation and loneliness. Funeral homes could also participate in this initiative. New immigrants are another group who would benefit from this information.

For further suggestions to maximize the effectiveness of public education materials, see Appendix D.

---

602 https://www.eenzaam.nl

603 https://www.campaigntoendloneliness.org

604 http://www.bc211.ca

605 Evenings, the night, weekends, and holidays appear to be peak times for isolation and loneliness (McInnis & White, 2001; Steed et al., 2007). Loneliness may be especially prominent during night, when the feelings of threat and vulnerability that characterize loneliness become even more pronounced (Cacioppo et al., 2002a; Hawkley, Preacher, & Cacioppo, 2010; Matthews et al., 2017; Wong, 2015). One lonely senior offers another insight: “Loneliness catches up with you when you switch off that light…When there is nothing to occupy your thoughts, then loneliness comes” (Roos & Klopper, 2010, p. 284).

Sectors: Academic, Not-for-Profit

<u>Recommendation 19</u>: Incorporate information about isolation and loneliness into educational curricula for students, service providers, and clients.

Time Frame: Medium-term

Suggested Lead: City of Vancouver Social Policy & Projects Division

Suggested Partners: Vancouver School Board; local academics; BC Psychogeriatric Association

Using information from the proposed loneliness website, the training material described in Recommendation #4, and the database of interventions described in Recommendation #8, the City should work with educational partners to create an online, self-directed mini-course about social isolation and loneliness that instructors, service providers, and businesses could incorporate into their curricula. Those who would benefit from such a course include:

- High school students taking guidance classes, given that the earlier people learn how to cope with isolation and loneliness, the less likely they may be to experience chronic forms of these problems later in life[606]
- Students in gerontology, social work, counseling, nursing, and medicine[607]
- Seniors attending continuing education classes (e.g., SFU 55+ program)
- Service providers who wish to educate their clients about isolation and loneliness

To enhance learning, local academics and experts on isolation and loneliness could be invited as guest speakers and present some of the material from the mini-course.

[606] ACEVO, 2015; Dykstra & Fokkema, 2015
[607] Holt-Lundstad & Smith, 2017

Research, Measurement, and Evaluation

There is a dearth of high-quality empirical data relating to causes and consequences of isolation and loneliness, how organizations address these problems, barriers to service provision, and program effectiveness. As mentioned by some participants in the community consultations, without a solid research base it is challenging to plan programs and to evaluate their effectiveness, long-term impact, and cost. This, in turn, makes it difficult to justify program funding and to allocate resources efficiently.[608] Given these shortcomings, the following recommendations are offered.

Sector: Government

Recommendation 20: Improve the quantity and quality of data on the prevalence of social isolation and loneliness in the city.

Time Frame: Medium-term

Suggested Lead: City of Vancouver Social Policy & Projects Division

Suggested Partners: Vancouver Coastal Health; BC Ministry of Health; Statistics Canada

- Conduct surveys on a regular basis to determine the prevalence of isolation and loneliness (including different *types* of loneliness) across the city. Given the fact that isolation and loneliness can become worse over time, and that isolation and loneliness in early life may have negative health consequences later on[609], prevalence should be measured among all age groups, not just seniors.
- Work with all government agencies to ensure that all are using the same, well-validated measures of isolation and loneliness in order to facilitate comparability of data across time and place (e.g., multi-item scales like the De Jong Gierveld Loneliness Scale).[610]
- Work with measurement experts to evaluate (or test) the effectiveness of direct vs. indirect scales in terms of feasibility (e.g., respondent burden), validity, and reliability.

[608] MacCourt, 2007
[609] Caspi et al., 2006; Danese et al., 2009; Lacey et al., 2014
[610] For more information on instrument selection and measurement issues, see Campaign to End Loneliness (2015a). For detailed background information on developing instruments, see Jopling (2014).

- In addition to targets for social support (e.g., encouraging people to try to find at least four trusted people in their social support network that they can rely on in times of need), specify clear and reasonable targets for preventing or reducing loneliness.
- Conduct a citywide survey to create a snapshot of how many organizations are aware of, and are currently working towards, preventing or alleviating social isolation and loneliness (or planning to do so). Also consider asking if they would *like* to do work on this topic, but do not have the necessary resources to do so. With these data, the City can set appropriate targets for organizations (e.g., a certain percentage of organizations will be aware of social isolation or loneliness by a certain time). The City could also use these data to determine the specific resource gaps that are impeding progress on reducing or preventing isolation and loneliness.
- Track population-level changes in broad outcomes related to isolation and loneliness, including incidence of falls; physician and emergency room visits; days spent in hospital; nursing home admissions; and medication use. This can help determine if interventions, particularly those at a broader, systemic level, are having any impact on the prevalence and/or consequences of social isolation and loneliness.

Sector: Not-for-Profit

Recommendation 21: Improve the quality of program evaluation.

Time Frame: Medium-term

Suggested Lead: Not-for-profit organizations

Suggested Partners: SFU Department of Gerontology; independent research consultants

It is acknowledged that most organizations have limited resources to conduct rigorous research on their interventions. However, all organizations can start to take small steps towards this end; if they do not, they risk wasting time and scarce resources on ineffective interventions and, worse, prolonging their clients' suffering. Even stating a *commitment* to improve the quality of evaluation would be a positive step in the right direction. Specific recommendations are listed in Appendix E, but five are emphasized here:

- Make prevention or reduction of isolation or loneliness an explicit goal, and make sure it is clearly defined so that it can be accurately measured. While improving

social connectedness is a broad, over-arching goal, it should be defined more precisely, such as reducing social or emotional loneliness by a certain degree.

- Aim to use a before-after research design with a randomly selected control group to determine what the outcomes would have been for those who did not participate in the intervention, and to minimize the impact of various confounds like self-selection bias[611] and regression to the mean.[612]
- Determine which specific program elements are effective and why. Qualitative evaluations are useful in this regard. With this information, programs can be improved and essential elements can be reproduced elsewhere on a larger scale.
- Examine both short- and long-term program outcomes. A program may not be valuable if it only leads short-term changes. This is especially important for chronic forms of isolation and loneliness, which tend to be resistant to change.
- Consider examining the impact of prevention and intervention efforts on key outcomes related to isolation and loneliness (e.g., subjective well-being, physical health, mortality, and healthcare utilization/spending).

Sector: Academic

Recommendation 22: Improve the quality of basic research on the risk factors, trajectories, and consequences of isolation and loneliness, and develop new, research-based interventions.

Time Frame: Medium-term

Suggested Lead: Individual academic organizations

Suggested Partners: Research networks like Campaign to End Loneliness; TBD

Academics have made tremendous strides in improving knowledge about isolation and loneliness and developing innovative, empirically based interventions. The following recommendations are offered to help build on this excellent work:

[611] When individuals select themselves into an intervention group (as opposed to being randomly assigned). This can make it difficult to determine whether outcomes after the intervention are due to the intervention itself as opposed to characteristics of the individuals who chose to participate.
[612] When a variable is extreme on its first measure, it tends to be closer to the average level on subsequent measurements. In non-randomized studies, this statistical reduction (e.g., in a person's loneliness score) may be mistakenly interpreted as evidence for the effectiveness of the intervention (Linden, 2013).

- Examine risk factors and consequences of isolation and loneliness among local residents (given that existing research is focused at the national level).
- Examine risk factors, consequences, and interventions pertaining to *specific forms* of isolation and loneliness (e.g., transient vs. chronic loneliness; emotional vs. social loneliness)
- Conduct longitudinal studies to help discern causal pathways (e.g., how isolation and loneliness emerge over the life course; how transient loneliness becomes chronic; whether different combinations/categories of isolation and loneliness are stable over time and how people move in and out of them).
- Study isolation and loneliness in specific groups that have not received much attention, including people with substance abuse problems, unemployed people, nursing home residents, and those who are homeless.
- Examine moderator effects (i.e., specific risk factors, outcomes, and pathways as a function of gender, age, ethnicity, sexual orientation, social class, or specific triggering events). This is important because risk factors specific to one group of people may not be apparent when examining risk factors in mixed samples.[613]
- Standardize social isolation and loneliness instruments to facilitate data pooling (e.g., for purposes of meta-analysis).
- Conduct quantitative and qualitative research on the best ways to define and measure social isolation, given the lack of consensus regarding this construct.[614] (This is less of an issue with loneliness.)
- Propose and study the utility of cut-off points for isolation and loneliness scales. These cut-off points may be useful in defining different groups (e.g., people who are isolated and lonely vs. those who are lonely but not isolated), as well as developing targeted interventions and determining eligibility for services.[615]
- Develop advanced, targeted interventions, especially those addressing maladaptive social cognition.
- Develop innovative strategies to reach isolated and lonely seniors who do not typically participate in programs/interventions.
- Develop innovative strategies to *prevent* chronic isolation and loneliness.
- Develop costing tools to enable local government and service providers to determine cost savings as a result of isolation and loneliness interventions

[613] Dahlberg et al., 2015
[614] Newall & Menec, 2017
[615] Ibid.

Ongoing Monitoring

Recommendation 23: Assign oversight to the Seniors' Advisory Committee to monitor the City's ongoing implementation of strategies based on this report.

Time Frame: Short-term

Suggested Lead: City of Vancouver Seniors' Advisory Committee

Suggested Partners: City of Vancouver Social Policy & Projects Division

Once the City has selected a series of strategies based on the recommendations in this report, progress should be monitored regularly by the Seniors' Advisory Committee and its SILAS subcommittee (which should become permanent). The subcommittee should work with the Social Policy & Projects Division to ensure not only that the strategies are effectively implemented, but that they are helping to meet the goals of the Healthy City Strategy, the Age-Friendly Action Plan, the Social Infrastructure Plan, and the World Health Organization Global Age-Friendly City program. Given the diversity of seniors who are affected by social isolation and loneliness, it is also recommended that the SILAS subcommittee include members from other City of Vancouver advisory committees, including the LGBTQ2+, Cultural Communities, and Urban Indigenous People's Advisory Committees.

Conclusion

As is hopefully clear after reading this report, social isolation and loneliness are complex phenomena. Although some readers may be seeking it, there is no simple solution—no ideal social activity or program—that will "cure" isolation or loneliness. This is especially so with chronic cases, which may be caused by long-standing factors and exacerbated by changes in social cognition and behaviour. The stigma surrounding isolation and loneliness, coupled with the perception that these are private matters, further complicate efforts to remedy them. It is important, therefore, to maintain realistic expectations.

It is also important to remember that loneliness and isolation cannot be completely eliminated. Some degree of isolation and loneliness are a normal part of the human condition; indeed, without loneliness, we would lack the motivation to form and maintain the human ties that are essential to our health and well-being.

Nevertheless, it is clear that a variety of factors—ranging from the genetic to the societal—can increase the risk for prolonged, painful isolation and loneliness. This report has attempted to offer some suggestions on how these factors and their negative effects can be reduced or, better yet, prevented. Given the multidimensional nature of these problems, this report has emphasized a coordinated approach between many different players. As the Campaign to End Loneliness reminds us, "A problem which is often about a lack of connections needs a connected response."[616]

The recommendations in this report are not meant to be prescriptive; rather, they are intended to be "jumping-off" points for further discussion and brainstorming. Interested parties are invited to adopt the recommendations as they are, or adapt them based on their specific needs and available resources. Whatever they do, it is hoped that they will approach the recommendations with an open mind. Moreover, it is hoped that they will evaluate and document their efforts—successful or not—and share them with their colleagues as well as the Seniors' Advisory Committee. The more that we can learn about isolation and loneliness, and the more knowledge we can share, the better equipped we will be to tackle these problems effectively.

From time to time, an addendum may be added to this report to reflect new innovations and best practices. Expired web links may also be corrected when possible. Readers are encouraged to visit http://www.seniorsloneliness.ca for updates and are welcome to provide comments and suggestions.

* * *

The opinions and recommendations in this report, and any errors or omissions, are those of the author and do not necessarily reflect the views of the funders or publishers.

[616] Campaign to End Loneliness, 2011, p. 15

Appendix A:

The UCLA Loneliness Scale (Version 3)

For items with asterisks, use this ranking:
1 = Always, 2= Sometimes, 3= Rarely, 4 = Never

For items without asterisks, use this ranking:
1 = Never, 2, Rarely, 3 = Sometimes, 4 = Always

	Item	Score
*	1. How often do you feel that you are "in tune" with the people around you?	
	2. How often do you feel that you lack companionship?	
	3. How often do you feel that there is no one you can turn to?	
	4. How often do you feel alone?	
*	5. How often do you feel part of a group of friends?	
*	6. How often do you feel that you have a lot in common with the people around you?	
	7. How often do you feel that you are no longer close to anyone?	
	8. How often do you feel that your interests and ideas are not shared by those around you?	
*	9. How often do you feel outgoing and friendly?	
*	10. How often do you feel close to people?	
	11. How often do you feel left out?	
	12. How often do you feel that your relationships with others are not meaningful?	
	13. How often do you feel that no one really knows you well?	
	14. How often do you feel isolated from others?	
*	15. How often do you feel you can find companionship when you want it?	
*	16. How often do you feel that there are people who really understand you?	
	17. How often do you feel shy?	
	18. How often do you feel that people are around you but not with you?	
*	19. How often do you feel that there are people you can talk to?	
*	20. How often do you feel that there are people you can turn to?	

***Scoring**:* Add all the numbers. General cut-offs: less than 22 = low loneliness; 22-43 = middle of the spectrum; 44 and over = high loneliness. Alpha reliability in most samples >.90 (i.e., high reliability).

Source: Russell, D. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment, 66*, 20-40. (A brief, 3-item version is available, but is more suitable for research surveys rather than individual screening. See Hughes et al., 2004.)

Appendix B:

The De Jong Gierveld Loneliness Scale

Indicate for each statement the extent to which it applies to your situation, the way you feel now.

Item	Yes!	Yes	More or less	No	No!
There is always someone I can talk to about my day-to-day problems.					
I miss having a really close friend.					
I experience a general sense of emptiness.					
There are plenty of people I can lean on when I have problems.					
I miss the pleasure of the company of others.					
I find my circle of friends and acquaintances too limited.					
There are many people I can trust completely.					
There are enough people I feel close to.					
I miss having people around me.					
I often feel rejected.					
I can call on my friends whenever I need them					

***Scoring**:*

Step 1

- Count the neutral and positive answers ("more or less", "yes", or "yes!") on items 2, 3, 5, 6, 9, 10. This is the *emotional loneliness score.*
- Count the missing values (i.e., no answer) on items 2, 3, 5, 6, 9, 10. This is the *missing emotional loneliness score.*
- Count the neutral and negative ("no!", "no", or "more or less") answers on items 1, 4, 7, 8, 11. This is the *social loneliness score*.
- Count the missing values (i.e., no answer) on items 1, 4, 7, 8, 11. This is the *missing social loneliness score*.

Step 2

- Compute the *total loneliness score* by taking the sum of the *emotional loneliness score* and the *social loneliness score*. The higher the total score, the higher the level of current loneliness. The appropriateness of different cut-off points requires more study, but in a Dutch sample, the authors tentatively suggested the following: 0-2 = not lonely; 3-8 = moderately lonely; 9-10 = very lonely; 11 and over = severely lonely (van Tilburg & de Jong Gierveld, 1999).

Notes

- The *emotional loneliness score* is valid only if the *missing emotional loneliness score* equals 0.
- The *social loneliness score* is valid only if the *missing social loneliness* score equals 0.
- The *total loneliness score* is valid only if the sum of the *missing emotional loneliness score* and the *missing social loneliness score* equals 0 or 1.
- Alpha reliability in most samples is generally between .80 and .90 (i.e., good reliability).

Source: de Jong Gierveld, J., & van Tilburg, T.G. (2017). *Manual of the Loneliness Scale*. Amsterdam: Vrije Universiteit.

Briefer versions of the scale are available; see the manual above for more information.

Appendix C:

Additional General Recommendations for Optimizing Programs and Interventions to Address Social Isolation and Loneliness

The following tips are offered in addition to those described in Recommendation #9:

- When selecting from multiple interventions, consider the pros and cons of each. While some programs may seem ideal on the surface, they may have unintended consequences (e.g., a program that encourages social participation but fails to address maladaptive social cognition may inadvertently reinforce negative social perceptions, leading to discouragement and further isolation or loneliness).
- Consider the success and failures of previous programs. Why did certain programs work? Which elements worked or did not, and why?
- Aim for programs that are multidimensional (e.g., those which provide opportunity for social contact but also include a social-cognitive component). Examples of such programs are described by SPARC BC[617] and Masi et al.[618] Multidimensional programs can equip people with an arsenal of tools they can use to confidently prevent or cope with isolation and loneliness.
- Where possible, involve seniors in *all* aspects of programming, from design to delivery to evaluation. This can improve the appeal of programs because older adults are the best judges of what they would like to. It can also give them a chance to make a valuable contribution, which many lonely people say they miss.[619] Finally, as mentioned in the community consultations, active involvement can help people maintain a sense of independence, personal control, and self-efficacy, which may be important in preventing loneliness.[620]
- Do not assume that just because a client is participating in an activity that they actually enjoy it; they may simply be participating because there are no other options available.
- Consider casual “drop-in” opportunities for social interaction that do not require a commitment.[621] This can be attractive for seniors who are reticent of social contact. It can allow them to gradually acclimate to social contact and develop greater confidence in their social abilities.

[617] SPARC BC, 2017
[618] Masi et al., 2011
[619] Hauge & Kirkevold, 2012; Wong, 2015
[620] Fry & Debats, 2002; Newall et al., 2009, 2014; Watson & Nesdale, 2012
[621] Kantar Public, 2016

- Avoid advertising programs as being specifically for isolation/loneliness, given the stigma surrounding these issues. Instead, use more generic language (e.g., “Relationship Enrichment Program” or “Friendship Development Program”).
- Avoid infantilizing or patronizing clients. This includes offering activities that are more suitable to children than grown adults, or speaking in a child-like manner (i.e., elderspeak[622]).
- Examine your organization’s culture and how it impacts program delivery. In particular, beware the formation of “cliques” among your service-users because this can make some lonely people feel even more excluded than they already do.
- Try your best to accommodate clients with sensory impairments (e.g., provide interpreters for deaf clients).
- Offer programs at various times of the day, not just during regular business hours.

[622] Language resembling babytalk: Brenoff, 2017; Caporael, 1981; Kemper, 1994; Leland, 2008; Simpson, 2002; Williams, Kemper, & Hummert, 2003

Appendix D:

Additional Recommendations for Maximizing the Effectiveness of Public Education Materials

The following tips are offered in addition to those described in Recommendation #18:

- Seniors should review all materials to ensure they are appropriate in terms of language, colour, contrast, font size, visual interest, etc. For examples of suitable print materials, see materials used in the RISE social isolation campaign.[623]
- Seniors should be involved in usability testing of the website (e.g., checking navigation, menu structures, and accessibility for people with visual impairments).
- Given higher rates of isolation and loneliness among people with language difficulties, information should be presented in multiple languages.
- Materials should avoid inadvertently stigmatizing or pathologizing isolated and lonely people (e.g., by using language suggestive of mental illness).
- Older adults should not be depicted in an ageist, stereotypical manner, given that ageism is associated with isolation and loneliness[624] and that it may discourage seniors from seeking help. In particular, images of frail seniors should be avoided, as should images of seniors who are exceptionally active and engaged, as this can make some seniors feel inadequate or abnormal.[625]
- Given the diversity of seniors in Vancouver, as well as the higher rates of isolation and loneliness among certain subgroups, images should reflect different ethnicities, cultures, sexual orientations, gender expressions, and physical abilities.
- To avoid conveying a paternalistic attitude, include messaging from seniors themselves, rather than messages delivered exclusively by experts or clinicians.
- Positive attention should be drawn to seniors who have successfully *recovered* from social isolation/loneliness, with information on how they overcame these problems.[626]

[623] http://rise-cisa.ca
[624] Sutin et al., 2015
[625] National Seniors Council, 2014
[626] Sarner, 2018

- All materials should include a link to the loneliness website described in Recommendation #18 and perhaps information about the central referral service described in Recommendation #5.
- The effectiveness of the education campaign should be measured regularly, especially if the campaign is costly. Outcome measures should include not only broad indicators like reductions in isolation and loneliness, but also specific actions resulting from the campaign (e.g., asking if citizens and service providers saw/heard the information, learned something about isolation/loneliness, passed the information along to someone, or took steps to help themselves or someone else experiencing isolation or loneliness).
- Any information gleaned about best practices for this advertising campaign should be shared with service providers to assist them with their own advertising and public education efforts.

Appendix E:

Additional Recommendations for Improving Quality of Measurement and Evaluation of Interventions

The following tips are offered in addition to those described in Recommendation #21:

- Make measurement an integral part of interventions rather than an add-on (e.g., use answers to a loneliness scale to start a conversation with a client about their specific relationship needs).
- Ensure that clients complete measurement instruments themselves; avoid relying on second-hand accounts from staff, as these can be biased.
- Given the stigma surrounding loneliness and the reluctance to admit it, consider allowing clients to complete loneliness scales at home or online rather than in the presence of a staff member.
- Make sure to get "buy-in" from staff members and volunteers regarding the importance of measurement. Without buy-in, staff and volunteers may be less inclined administer measures carefully and consistently.
- Conduct measurements throughout an intervention (including right at the beginning) to identify possible changes in "real time."[627] This may help clarify what is working and what is not.
- Consider involving seniors themselves in the research process, including planning and measurement (i.e., participatory action research).
- Where possible, use sufficiently large sample sizes to (1) increase statistical power and (2) avoid false positive results.[628]
- Examine which approaches work best for specific groups, including minority groups; those suffering from specific types of loneliness (i.e., social vs. emotional loneliness, transient vs. chronic); those presenting with specific combinations of isolation and loneliness (e.g., those who are isolated and lonely; those who are lonely but not isolated); and men compared to women. Also consider which factors *protect* against isolation and loneliness in these different groups.
- When measuring cost-effectiveness, consider not only program costs (e.g., staffing, materials) but also how much support is needed from informal caregivers and volunteers. Also measure/estimate health-related cost savings like hospital admissions and physician visits.[629]

[627] E.g., Bouwman et al., 2017
[628] Button et al., 2013
[629] Jopling, 2014; McDaid, Bauer, & Park, 2017

- Partner with local academics, including graduate students from SFU Gerontology, to ensure sound measurement and evaluation.
- Seek to publish or otherwise share the results of your program evaluations. This increases the chances that successful interventions will be reproduced by others. It also increases the probability of securing additional program funding.

Appendix F:

Summary of Responses from Community Consultation Events

From March 29th to April 25th, 2017, the City of Vancouver hosted four community consultations with the intent of creating dialogue around social isolation and loneliness among seniors living in Vancouver. Over 200 individuals participated in these events, with representation from government, health authorities, neighbourhood houses, senior's centres, educational institutions, and other organizations and individuals providing services to seniors. Participants also included a diverse representation of individuals from visible minorities, disabilities, Indigenous, and LGBTQ+ communities.

Date	Not-for-profit	Academic	Government	Other	Total
March 29th	21	1	10	9	41
April 6th	13	5	9	7	34
April 10th	31	11	14	9	65
April 25th	28	4	21	11	64
Totals	93	21	54	36	204
	46%	**10%**	**26%**	**18%**	**100%**

The engagement portion of the event was conducted in a "world café" format. At each event, participants were invited to break out into small groups and discuss working together as a community to support seniors in Vancouver who are experiencing (or are at risk for) social isolation or loneliness. The five questions focused on identification, outreach, services, barriers, and public education.

Discussion questions

1. What do we know about seniors who are socially isolated and/or lonely, and how can we help them?
2. How do we identify and reach out to seniors who are socially isolated and/or lonely?
3. How can we help link seniors who are socially isolated and/or lonely to services that will support them?
4. How do we address the barriers that prevent all seniors from getting the support they need to address social isolation and/or loneliness?
5. What can we do to raise public awareness about social isolation and/or loneliness among seniors?

To conclude each discussion, each table identified the top three items they would like to see implemented to reduce or prevent isolation and loneliness among seniors. At the end of the event, participants were invited to identify their top priorities from the list of action items generated during the table discussions. Below is a list of the top five action items receiving the highest number of votes.

What do we know about socially isolated and/or lonely seniors and how can we help them?	
Votes	**Action Items**
16	Address communication issues (e.g., language barriers, literacy, technology skills).
15	Develop better transportation services for seniors (as family members should not be relied on for this)
15	Ensure lack of funding for services is an election issue.
13	Support meaningful contact with peers, language, and cultures.
12	Support opportunities for leadership by seniors in their communities .
11	Ensure information and referral services are available in different languages.

How do we identify and reach out to socially isolated and/or lonely seniors?	
Votes	**Action Items**
13	Establish networks to support service providers, healthcare agencies, and community centres to share information and resources.
11	Encourage information sharing among service providers and organizations (e.g., centralize data, develop better connections).
9	Reduce transportation barriers that prevent seniors from participating in community life and accessing services.
9	Encourage intergenerational programs and opportunities to connect with seniors.
8	Build the capacity of volunteers, neighbours, and others to connect and build relationships.

How can we link seniors who are socially isolated and/or lonely to services that support them?	
Votes	**Action Items**
13	Ensure that programs have sustainable funding in order to build trust and rapport among individuals, especially those in marginalized communities.
10	Support intergenerational connections (e.g., work with youth and seniors to promote mutual respect and acceptance, and to share multicultural connections and life experiences).
10	Utilize non-traditional grassroots groups to foster connections and trust between seniors and communities (e.g., block watch, police, public library staff, rental building managers).
10	Encourage networking and relationship-building between service providers in order to share resources
10	Recognize healthcare professionals and organizations as information sources for a variety of senior services

How can we reach the “hard-to-reach” and how can we ensure that they can reach us?	
Votes	**Action Items**
19	Recognize the importance of funding for a backbone organization that works to ensure consistent program delivery.
14	Ensure that support services offer consistent relationships and outreach by allocating sufficient resources and clarifying mandates.
9	Establish satellite seniors’ centres that support the development of strong connections and that provide easier access to emotional support, transportation, and caregiver assistance.
9	Support the development of networks and partnerships that connect service providers doing similar work; that increase collaboration on new projects; and that link organizations to provide better service.
8	Support cultural integration through education, sharing, and the development of connections between residents.

What can we do to raise public awareness about social isolation and/or loneliness among seniors?	
Votes	**Action Items**
21	Develop intergenerational programs to raise awareness, encourage involvement of families and communities, and reach out beyond the population of seniors.
14	Identify gaps in seniors' spaces. Create seniors' centres and similar spaces in neighbourhoods that currently lack them.
12	Raise policymakers’ awareness social isolation and loneliness, and seniors’ issues more generally. Be persistent.
11	Support seniors’ services workers by raising awareness of the value they provide.
10	Encourage governments to provide funding for more events that encourage collaboration between organizations.

Evaluation

The following summarizes the feedback received by participants in the community consultations.

What did you like about the event?

Responses (*n*=116)	Total
The world café format and questions	27%
Opportunities to share ideas, learn, and collaborate	21%
Networking opportunities/resource sharing	21%
Diversity and attendance of participants	17%
Well-organized event	10%
Other (e.g., facilitation of the tables; enthusiasm and engagement from people in attendance)	4%
Total	**100%**

Was there anything missing that would make the event better?

Responses (*n*=73)	Total
Organization (e.g., spacing tables further apart, more refreshments)	21%
Nothing	19%
Discussion questions need further clarification; should be less repetitive and more action-focused	14%
Provide follow-up materials	11%
Greater variety of languages or more organizations at the events	11%
More time for discussion and/or smaller table discussion groups	10%
Additional time for networking	7%
More seniors at the events	7%
Total	**100%**

Were the discussion questions relevant to your needs and interests?

Responses (*n*=41)	Total
Yes, the questions were relevant and interesting	56%
Other	27%
No, the questions were too similar	10%
Yes, but it is challenging to see how to move forward	5%
No, we need more practical, action-based questions	2%
Total	**100%**

Appendix G:

Members of the Social Isolation and Loneliness Project Collaborative

Name	Affiliation
Marcy Cohen	- Researcher, Raising the Profile Project
Eddy Elmer	- PhD Student, Vrije Universiteit Amsterdam - Member, City of Vancouver Seniors' Advisory Committee
Clemencia Gómez	- Executive Director, South Granville Seniors' Centre - Member, City of Vancouver Seniors' Advisory Committee
Miranda Haley	- A.S.K. Friendship Centre
Beatrice Ho	- Member, City of Vancouver Seniors' Advisory Committee
Yasmin Jetha	- Director of Home Health, Vancouver Coastal Health
Shelley Jorde	- Seniors Hub Director, South Vancouver Neighbourhood House
Lidia Kemeny	- Director, Granting & Community Initiatives, Vancouver Foundation
Anthony Kupferschmidt	- Executive Director, West End Seniors' Network - Member, City of Vancouver Seniors' Advisory Committee and City of Vancouver Fire & Rescue Services Advisory Committee
Dale Lutes	- Member, City of Vancouver Seniors' Advisory Committee
Atiya Mahmood	- Associate Professor of Gerontology, Simon Fraser University
Claudine Matlo	- Executive Director, Mount Pleasant Neighbourhood House
Colleen McGuinness	- Chair, City of Vancouver Seniors' Advisory Committee
Susan Mele	- Recreation Supervisor, Vancouver Board of Parks & Recreation: Kerrisdale Community Centre
Wendy Mendes	- Social Infrastructure, City of Vancouver
Amanda Mitchell	- Community Engagement, City of Vancouver
Scott Ricker	- Vice-chair, City of Vancouver Seniors' Advisory Committee
Carol Ann Young	- Senior Social Planner, City of Vancouver

Appendix H: References

Aartsen, M., & Jylha, M. (2011). Onset of loneliness in older adults: results of a 28-year prospective study. *European Journal of Ageing, 8*(1), 31-38. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3047676/

ACEVO (Association of Chief Executives of Voluntary Organisations) (2015). *Coming in from the cold: Why we need to talk about loneliness among our young people*. London, UK: Author. Available online: https://www.acevo.org.uk/www.acevo.org.uk/remaking-state-better-fairer-public-service-commissioning/coming-cold

Acierno, R., Hernandez, M. A., Amstadter, A. B., Resnick, H. S., Steve, K., Muzzy, W., & Kilpatrick, D. G. (2010). Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: The National Elder Mistreatment Study. *American Journal of Public Health*, *100*(2), 292-297. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804623/

Age UK (2017). Age UK's loneliness heat map questions and answers. London, UK: Author. Available online: https://www.ageuk.org.uk/contentassets/972087f6d82841569c55d96a86e0dd87/age_uk_loneliness_heat_maps_faqs.pdf

Agren, A. (2017). What are we talking about? Constructions of loneliness among older people in the Swedish news-press. *Journal of Aging Studies, 41,* 18-27.

Anderson, C.M., & Martin, M.M. (1995). The effects of communication motives, interaction involvement, and loneliness on satisfaction: A model of small groups. *Small Group Research, 26*(1), 118-137. Available online: https://www.researchgate.net/publication/247720227_The_Effects_of_Communication_Motives_Interaction_Involvement_and_Loneliness_on_Satisfaction_A_Model_of_Small_Groups

Anderson, M., & Perrin, A. (2017). *Tech adoption climbs among older adults*. Washington, DC: Pew Research Center. Available online: http://www.pewinternet.org/2017/05/17/tech-adoption-climbs-among-older-adults/

Andrews, E. (2017, June 27). Why a city clock can be one of the loneliest places on earth. *City Lab* (from *The Atlantic*). Available online: https://www.citylab.com/life/2017/06/why-a-city-block-can-be-one-of-the-loneliest-places-on-earth/531852/

Asher, S.R., & Paquette, J.A. (2003). Loneliness and peer relations in childhood. *Current Directions in Psychological Science, 12*(3), 75-78.

Ayalon, L., Shiovitz-Ezra, S., & Palgi Y. (2013). Associations of loneliness in older married men and women. *Aging & Mental Health, 17*(1) 33-39.

Ayalon, L., Shiovitz-Ezra, S., & Roziner, I. (2016). A cross-lagged model of the reciprocal associations of loneliness and memory functioning. *Psychology and Aging, 31*(3), 255-261.

Ayazlar, G., & Güzel, B. (2014). The effect of loneliness in the workplace on organization commitment. *Procedia: Social and Behavioral Science, 131,* 319-325. Available online: https://doi.org/10.1016/j.sbspro.2014.04.124

Bailey, I. (2017, August 28). In high-density Vancouver, residents must create connections to cope with potential crises. *The Globe & Mail*. Available online: https://www.theglobeandmail.com/news/british-columbia/vancouver-residents-create-connections-to-cope-with-potential-crises/article36110467/

Bailey, N.W., & Moore, A.J. (2018). Evolutionary consequences of social isolation. *Trends in Ecology & Evolution, 33*(8), P565-607.

Baker, B. (2017, March). The biggest threat facing middle-age men isn't smoking or obesity. It's loneliness. *Boston Globe Magazine*. Available online: https://www.bostonglobe.com/magazine/2017/03/09/the-biggest-threat-facing-middle-age-men-isn-smoking-obesity-loneliness/k6saC9FnnHQCUbf5mJ8okL/story.html

Banks, J., Nazroo, J., & Steptoe, A. (2012). *The dynamics of ageing: Evidence from the English Longitudinal Study of Ageing 2002-12 (Wave 6)*. London, UK: Institute for Fiscal Studies. Available online: https://www.ifs.org.uk/publications/7411

Barnes, L. L., De Leon, C. F. M., Wilson, R. S., Bienias, J. L., & Evans, D. A. (2004). Social resources and cognitive decline in a population of older African Americans and whites. *Neurology*, 63(12), 2322–2326

Bartz, J.A., Tchalova, K., & Fenerci, C. (2016). Reminders of social connection can attenuate anthropomorphism. *Psychological Science, 27*(12), 1644-1650. Available online: https://www.uoguelph.ca/psychology/sites/uoguelph.ca.psychology/files/public/2016%20Bartz%20et%20al..pdf

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497-529.

BBC (2016a). *The age of loneliness* [documentary]. Available online: http://www.bbc.co.uk/programmes/b06vkhr5

BBC (2016b). Finland postal service starts befriending scheme. Available online: http://www.bbc.com/news/blogs-news-from-elsewhere-38105231

BBC (2017, January 18). Tesco in Forres introduces 'relaxed lane'. Available online: http://www.bbc.com/news/uk-scotland-north-east-orkney-shetland-38669395

Beach, B., & Bamford, S-M. (2016). *Isolation: The emerging crisis for older men*. London, UK: Independent Age. Available online: https://www.independentage.org/sites/default/files/2016-05/isolation-the-emerging-crisis-for-older-men-report.pdf

Bereznai, S. (2006). *Gay and single…forever? 10 things every gay guy looking for love (and not finding it) needs to know.* Boston, MA: Da Capo Lifelong Books.

Bergland, A.M.G., Tveit, B., & Gonzalez, M. T. (2016). Experiences of older men living alone: A qualitative study. *Issues in Mental Health Nursing, 37*(2), 113-120.

Bergling, T. (2001). *Sissyphobia: Gay men and effeminate behavior*. New York, NY: Southern Tier Editions.

Bergling, T. (2004). *Reeling in the years: Gay men's perspectives on age and ageism*. New York, NY: Harrington Park press.

Bergling, T. (2007). *Chasing Adonis: Gay men and the pursuit of perfection*. New York, NY: Harrington Park Press.

Berkman, L.F, & Syme, S.L. (1979). Social networks, host resistance, and mortality: A nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology, 109*(2), 186-204. Scale available online: https://cdn1.sph.harvard.edu/wp-content/uploads/sites/432/2017/01/Social_Support_Berkman_Syme.docx

Berkman, L.F. (1995). The role of social relations in health promotion. *Psychosomatic Medicine, 57*(3), 245-254.

Bernal, N. (2019, October 10). Why Monmouthshire is leading the way in tackling Britain's loneliness epidemic. *The Telegraph*. Available online: https://www.telegraph.co.uk/technology/2019/10/09/can-radical-new-plan-end-britains-loneliness-epidemic-using/

Bernhard, T. (2011). How to turn loneliness into sweet solitude. *Psychology Today*. Available online: https://www.psychologytoday.com/us/blog/turning-straw-gold/201105/how-turn-loneliness-sweet-solitude

Beutel, M., Klein, E., Brähler, E., Reiner, I., Jünger, C., Michal, M., Wiltink, J., Wild, P.S., Munzel, T., Lackner, K.J., & Tububos, A.N. (2017). Loneliness in the general population: Prevalence, determinants and relations to mental health. *BMC Psychiatry Open, 17*, 97. Available online: https://doi.org/10.1186/s12888-017-1262-x

Blum, D. (1994). *The monkey wars*. UK: Oxford University Press.

Blum, D. (2002). *Love at goon park: Harry harlow and the science of affection*. Cambridge, MA: Perseus Publishing.

Bodner, E., & Bergman, Y. (2016). Loneliness and depressive symptoms among older adults: The moderating role of subjective life expectancy. *Psychiatry Research, 237*, 78-82.

Böger, A., & Huxhold, O. (2018a). Do the antecedents and consequences of loneliness change from middle adulthood into old age? *Developmental Psychology, 54*(1), 181-197.

Böger, A., & Huxhold, O. (2018b). Age-related changes in emotional qualities of the social network from middle adulthood into old age: How do they relate to the experience of loneliness? *Psychology and Aging, 33*(3), 482-496.

Bower, J.E., Shiao, S.L., Sullivan, P., Lamkin, D.M., Atienza, R., Mercado, F., Arevalo, J., Asher, A., Ganz, P.A., & Cole, S.W. (2018). Prometastatic molecular profiles in breast tumors from socially isolated women. *JNCI Cancer Spectrum, 2*(3), pky029. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6054021/

Bouwman, T., Aartsen, M., van Tilburg, T.G., & Stevens, N. (2017). Does stimulating various coping strategies alleviate loneliness? Results from an online friendship enrichment program. *Journal of Social and Personal Relationships, 34*(6), 793-811. Available online: https://dx.doi.org/10.1177%2F0265407516659158

Brashears, M.E. (2011). Small networks and high isolation? A reexamination of American discussion networks. *Social Networks, 33*(4), 331-341.

Bremner, M. (2015, June 26). The lonely end: In aging Japan, thousands die alone and unnoticed every year. Toru Koremura is there to clean up what they leave behind. *Slate*. Available online: http://www.slate.com/articles/news_and_politics/roads/2015/06/kodokushi_in_aging_japan_thousands_die_alone_and_unnoticed_every_year_their.html

Brennan-Ing, M., Seidel, L., Larson, B., & Karpiak, S.E. (2014). Social care networks and older LGBT adults: Challenges for the future. *Journal of Homosexuality, 61*(1), 21-52.

Brenoff, A. (2017, April 21). Using baby talk with seniors is insulting, not cute. *Huffington Post*. Available online: http://www.huffingtonpost.ca/entry/using-baby-talk-with-seniors-is-insulting-not-cute_us_58f8d8ebe4b06b9cb9147a3a

Brent, L.J.N., Ruiz-Lambides, A., & Platt, M.L. (2017). Persistent social isolation reflects identity and social context but not maternal effects or early environment. *Nature cientific Reports Open, 7:17791*. Available online: https://www.nature.com/articles/s41598-017-18104-4

Brinded, L. (2018, April 14). Within Britain's loneliness epidemic, young people in England are at the epicenter. *Quartz*. Available online: https://www.qz.com/1251944/within-britains-loneliness-epidemic-young-people-in-england-are-at-the-epicenter/

Brinkhues, S., Dukers-Muijrers, N., Hoebe, C., van der Kallen, C., Dagnelie, P., Koster, A., Henry, R.M.A., Sep, S., Schaper, N., Stehouwer, C., Bosma, H., Savelkoul, P., & Schram, M. (2017). Socially isolated individuals are more prone to have newly diagnosed and prevalent type 2 diabetes mellitus - The Maastricht Study. *BMC Public Health, 17*(1), 955. Available online: https://doi.org/10.1186/s12889-017-4948-6

British Columbia, Office of the Seniors Advocate (2017). *Every voice counts: Office of the Seniors Advocate Residential Care Survey: Provincial Results*. Victoria, BC. Available online: https://www.seniorsadvocatebc.ca/osa-reports/residential-care-survey/

Broome, S. (2016). *The missing million: In search of the loneliest in our communities*. London, UK: Campaign to End Loneliness. Available online:

https://www.campaigntoendloneliness.org/wp-content/uploads/The-Missing-Million-report-FINAL.pdf

Bruni, F. (2017, September 2). The real campus scourge. *New York Times Sunday Review*. Available online: https://www.nytimes.com/2017/09/02/opinion/sunday/college-freshman-mental-health.html

Burholt, V., & Scharf, T. (2014). Poor health and loneliness in later life: The role of depressive symptoms, social resources, and rural environments. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences,* 69(2), 311-324. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3968864/

Burholt, V., Windle, G., & Morgan, D.J. (2017). A social model of loneliness: The roles of disability, social resources, and cognitive impairment. *The Gerontologist, 57*(6), 1220-1030. Available online: https://doi.org/10.1093/geront/gnw125

Burns, D. (2012). *Feeling good: The new mood therapy* (Rev ed.). New York, NY: Avon.

Burns, L., & Lucy, L. (2018). Locating and measuring loneliness in the United Kingdom through the creation of a composite index. *SAGE Research Methods*. DOI: http://dx.doi.org/10.4135/9781526440457

Button, K., Ioannidis, J., Mokrysz, C., Nosek, B., Flint, J., Robinson, E., & Munafò, M. (2013). Power failure: Why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience, 14*(5), 365-376. Available online: https://doi.org/10.1038/nrn3475

Cacioppo, J.T. (2009, May 3). Epidemic of loneliness: Loneliness is far more than a social misfortune. *Psychology Today*. Available online: https://www.psychologytoday.com/blog/connections/200905/epidemic-loneliness

Cacioppo, J.T., & Cacioppo, S. (2014). Social relationships and health: The toxic effects of perceived social isolation. *Social & Personality Psychology Compass*, *8*(2), 58-72. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4021390/

Cacioppo, J.T., Cacioppo, S., & Boomsma, D. (2014). Evolutionary mechanisms for loneliness. *Cognition and Emotion, 28*(1), 3-21. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3855545/

Cacioppo, J.T., Cacioppo, S., Capitanio, J.P., & Cole, S.W. (2015). The neuroendocrinology of social isolation. *Annual Review of Psychology*, *66*, 733-767. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5130104/

Cacioppo, J.T., Chen, H-Y., & Cacioppo, S. (2017). Reciprocal influences between loneliness and self-centeredness: A cross-lagged panel analysis in a population-based sample of African American, Hispanic and Caucasian Adults. *Personality and Social Psychology Bulletin, 43*(8), 1125-1135.

Cacioppo, J.T., Fowler, J.H., & Christakis, N.A. (2009). Alone in the crowd: The structure and spread of loneliness in a large social network. *Journal of Personality and Social Psychology*, *97*, 977-991. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2792572/

Cacioppo, J.T., & Hawkley, L.C. (2003). Social isolation and health, with an emphasis on underlying mechanisms. *Perspectives in Biology and Medicine, 46*(3), S39-S52. Available online: https://www.researchgate.net/publication/9047804_Social_Isolation_and_Health_with_an_Emphasis_on_Underlying_Mechanisms

Cacioppo, J.T., & Hawkley, L.C. (2005). People thinking about people: The vicious cycle of being a social outcast in one's own mind. In K.D. Williams, J.P. Forgas, & W. von Hippel (Eds.), *The social outcast: Ostracism, social exclusion, rejection, and bullying* (pp. 91-108). New York, NY: Psychology Press. Available online: https://www.researchgate.net/publication/265842246_People_Thinking_About_People_The_Vicious_Cycle_of_Being_a_Social_Outcast_in_One's_Own_Mind

Cacioppo, J.T., & Hawkley, L.C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, *13*(10), 447-454. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2752489/

Cacioppo, J.T., Hawkley, L.C., Berntson, G.G., Ernst, J.M., Gibbs, A.C., Stickgold, R., & Hobson, J.A. (2002a). Do lonely days invade the nights? Potential social modulation of sleep efficiency. *Psychological Science*, *13*(4), 384-387.

Cacioppo, J.T., Hawkley, L.C., & Correll, J. (2013). Perceived social isolation within personal and evolutionary timescales. In C.N. DeWall (Ed.), *Handbook of social exclusion* (pp. 179-196). New York, NY: Oxford University Press.

Cacioppo, J.T., Hawkley, L.C., Crawford, L.E., Ernst, J.M., Burleson, M.H., Kowalewski, R.B., Malarkey, W.B., & van Cauter, E., & Berntson, G.G. (2002b). Loneliness and health: Potential mechanisms. *Psychosomatic Medicine*, *64*, 407-417. Available online: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.321.2982&rep=rep1&type=pdf

Cacioppo, J.T., Hawkley, L.C., Ernst, J.M., Burleson, M., Bernston, G.G., Nouriani, B., & Spiegel, D. (2006a). Loneliness within a nomological net: An evolutionary perspective. *Journal of Research in Personality, 40*, 1054-1085. Available online: http://static1.squarespace.com/static/539a276fe4b0dbaee772658b/t/53b0e963e4b0d621f6aaa261/1404103011411/8_10.1016_CacioppoHawkleyBurleson.pdf

Cacioppo, J.T., Hawkley, L.C., & Thisted, R.A. (2010). Perceived social isolation makes me sad: Five-year cross-lagged analyses of loneliness and depressive symptomatology in the Chicago Health, Aging, and Social Relations Study. *Psychology and Aging*, *25*(2), 453-463. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2922929/

Cacioppo, J.T., Hughes, M.E., Waite, L.J., Hawkley, L.C., & Thisted, R.A. (2006b). Loneliness as a specific risk factor for depressive symptoms: Cross-sectional and longitudinal analyses. *Psychology and Aging*, *21*(1), 140-151. Available online: https://www.researchgate.net/publication/7184615_Loneliness_as_a_Specific_Risk_Factor_for_Depressive_Symptoms_Cross-Sectional_and_Longitudinal_Analyses

Cacioppo, J.T., Norris, C.J., Decety, J., Monteleone, G., & Nusbaum, H. (2009). In the eye of the beholder: Individual differences in perceived social isolation predict regional brain activation to social stimuli. *Journal of Cognitive Neuroscience, 21*(1), 83-92. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2810252/

Cacioppo, J.T., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection*. New York, NY: Norton.

Cacioppo, S., Balogh, S., & Cacioppo, J.T. (2015). Implicit attention to negative social, in contrast to nonsocial, words in the Stroop task differs between individuals high 139 and low in loneliness: Evidence from event-related brain microstates. *Cortex, 70*, 213-233.

Cacioppo, S., Capitanio, J.P., & Cacioppo, J.T. (2014b). Toward a neurology of loneliness. *Psychological Bulletin, 140*(6), 1464-1504. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5130107/

Cacioppo, S., London, S., Cacioppo, J.T., Grippo, A.J., & Goossens, L. (2015). Loneliness: Clinical import and interventions. *Perspectives on Psychological Science, 10*(2), 238-249. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4391342/

Campaign to End Loneliness (2011). *Safeguarding the convoy: A call to action from the Campaign to End Loneliness*. London, UK: Author. Available online: https://campaigntoendloneliness.org/wp-content/uploads/downloads/2011/07/safeguarding-the-convey_-_a-call-to-action-from-the-campaign-to-end-loneliness.pdf

Campaign to End Loneliness (2012). *Combating loneliness: A guide for local authorities*. London, UK: Author. Available online: https://campaigntoendloneliness.org/wp-content/uploads/downloads/2012/03/A-guide-for-local-authorities-combating-loneliness.pdf

Campaign to End Loneliness (2013, November). Family doctors ill-equipped for loneliness epidemic. Available online: https://www.campaigntoendloneliness.org/wp-content/uploads/downloads/2013/11/FINAL-GP-Polling-PR-15.11.13.pdf

Campaign to End Loneliness (2013, December). Find out how we're working together to end loneliness in later life. Available online: https://www.campaigntoendloneliness.org/wp-content/uploads/downloads/2013/12/Campaign-to-End-Loneliness-leaflet-Large-Print.pdf

Campaign to End Loneliness (2015a). *Measuring your impact on loneliness in later life.* London, UK: Author. Available online: https://www.campaigntoendloneliness.org/wp-content/uploads/Loneliness-Measurement-Guidance1.pdf

Campaign to End Loneliness (2015b). *Promising approaches to reducing loneliness and isolation*. London, UK: Author. Available online:

https://www.campaigntoendloneliness.org/wp-content/uploads/Promising-approaches-to-reducing-loneliness-and-isolation-in-later-life.pdf

Campaign to End Loneliness (2016). Revealed: Fear and taboo linked to widespread loneliness in Britiain. London, UK: Author. Available online: https://www.campaigntoendloneliness.org/press-release/revealed-fear-taboo-linked-widespread-loneliness-britain/

Campaign to End Loneliness (2017, September 30). The loneliness epidemic: Research reveals loneliness in old age 'more likely than ever.' London, UK: Author. Available online: https://www.campaigntoendloneliness.org/wp-content/uploads/Loneliness-Is-An-Epidemic-1.pdf

Campbell, A. (2017, December 20). French postal workers are doubling as elderly caretakers. *Vice News*. Available online: https://news.vice.com/en_us/article/j5vq9y/french-postal-workers-are-doubling-as-elderly-caretakers

Campbell, H., & Elmer, E.M. (2015, November 13). The lonely client: Identifying psycholegal "soft spots" in the solicitor-client relationship. Paper presented at the 2015 Canadian Conference on Elder Law, Vancouver, BC.

Campbell, H., & Elmer, E.M. (2016, March 22). Loneliness and the law: Rethinking the right to refuse support and assistance. Presentation at the 62nd Annual Meeting of the American Society on Aging, Washington, DC.

Campos, W., Martinez, A., Sanchez, W., Estrada, H., Castro-Sanchez, N.O., & Mujica, D. (2016). A systematic review of proposals for the social integration of elderly people using ambient intelligence and social networking sites. *Cognitive Computation, 8*(3), 529-542.

Capitanio, J.P., Hawkley, L.C., Cole, S.W., & Cacioppo, J.T. (2014). A behavioral taxonomy of loneliness in humans and rhesus monkeys (*Macaca mulatta*). *PLoS One, 9*(10): e110307. Available online: https://doi.org/10.1371/journal.pone.0110307

Caporael, L.R. (1981). The paralanguage of caregiving: Baby talk to the institutionalized aged. *Journal of Personality and Social Psychology, 40*(5), 876-884.

Carstensen, L.L. (2006). The influence of a sense of time on human development. *Science, 312*(5782), 1913-1915. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2790864/

Carstensen, L.L., Isaacowitz, D., & Charles, S.T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist, 54*(3), 165-181. Available online: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.466.7454&rep=rep1&type=pdf

Caspi, A., Harrington, H., Moffitt, T.E., Milne, B.J., & Poulton, R. (2006). Socially isolated children 20 years later: Risk of cardiovascular disease. *Archives of*

Pediatrics & Adolescent Medicine, 160(8), 805-811. Available online: https://jamanetwork.com/journals/jamapediatrics/fullarticle/205331

Cattan, M., White, M., Bond, J., & Learmouth, A. (2005). Preventing social isolation and loneliness among older people: A systematic review of health promotion interventions. *Ageing and Society, 25*(1), 41-68. Available online: https://doi.org/10.1017/S0144686X04002594

CBC News (2018, January 17). Does Canada need a loneliness strategy? *The National*. Available online: http://www.cbc.ca/news/thenational/does-canada-need-a-loneliness-strategy-1.4492553

CBC News (2018, June 1). 'My doctors thinks it's super': Paramedic housecall program cuts down on ER visits. Available online: http://www.cbc.ca/news/health/paramedics-community-hamilton-program-1.4683269

CBC Radio (2019, September 11). Getting to know your neighbours? There's an app for that! Interview with Eddy Elmer on *CBC Radio One*. Available online: https://www.cbc.ca/player/play/1601582147559

Chappell, N.L., Funk, L.M. (2011). Social support, caregiving and aging. *Canadian Journal on Aging, 30*(3), 355-370.

Chiang, K.J., Chu, H., Chang, H.J., Chung, M.H., Chen, C.H., Chiou, H.Y, & Chou, K.R. (2010). The effects of reminiscence therapy on psychological well-being, depression, and loneliness among the institutionalized aged. *International Journal of Geriatric Psychiatry, 25*(4), 380-388. Available online: https://pdfs.semanticscholar.org/de81/a03ed6988807d6012df72faeec45176fdd6a.pdf

Child, S.T., & Lawton, L. (2017). Loneliness and social isolation among young and late middle-age adults: Associations with personal networks and social participation. *Aging & Mental Health*. Advance online publication.

Chipps, J., Jarvis, M.A., & Ramlall, S. (2017). The effectiveness of e-Interventions on reducing social isolation in older persons: A systematic review of systematic reviews. *Journal of Telemedicine and Telecare, 23*(10), 817-827.

Choi, E., Kwon, Y., Lee, M., Choi, J., & Choi, I. (2018). Social relatedness and physical health are more strongly related in older than younger adults: Findings from the Korean Adult Longitudinal Study. *Frontiers in Psychology, 19.* Available online: https://doi.org/10.3389/fpsyg.2018.00003

Choi, M., Kong, S., & Jung, D. (2012). Computer and Internet interventions for loneliness and depression in older adults: A meta-analysis. *Healthcare Informatics Research, 18*(3), 191-198. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3483477/ or https://synapse.koreamed.org/Synapse/Data/PDFData/1088HIR/hir-18-191.pdf

Ciobanu, R.O., & Fokkema, T. (2017). The role of religion in protecting older Romanian migrants from loneliness. *Journal of Ethnic and Migration Studies, 43*(2), 199-217.

Clarke, D., & McDougall, L. (2014). *Social isolation in Bristol: Risks, interventions and recommendations report*. Bristol, UK: Bristol City Council. Available online: https://www.bristol.gov.uk/en_US/policies-plans-strategies/social-isolation

Clouter-Fisher, D., Kobayashi, K., & Smith, A. (2011). The subjective dimension of social isolation: A qualitative investigation of older adults' experiences in small social support networks. *Journal of Aging Studies, 25*(4), 407-417.

Cohen, S., Doyle, W.J., Skoner, D.P., Rabin, B.S., & Gwaltney, J.M. (1997). Social ties and susceptibility to the common cold. *Journal of the American Medical Association, 277*(24), 1940-1944. Available online: http://www.psy.cmu.edu/~scohen/cohen_common-cold.pdf
Scale available here: http://www.midss.org/content/social-network-index-sni

Cohen, S., & Janicki-Deverts, D. (2009). Can we improve our physical health by altering our social networks? *Perspectives on Psychological Science, 4*(4), 375-378. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2744289/

Cohen-Mansfield, J., Hazan, H., Lerman, Y., & Shalom, V. (2016). Correlates and predictors of loneliness in older-adults: A review of quantitative results informed by qualitative insights. *International Psychogeriatrics, 28*(4), 557-576. Available online: https://doi.org/10.1017/S1041610215001532

Cohen-Mansfield, J., Shmotkin, D., & Goldberg, S. (2009). Loneliness in old age: longitudinal changes and their determinants in an Israeli sample. *International Psychogeriatrics, 21*(6), 1160-1170.

Cole, S.W., Capitanio, J.P., Chun, K., Arevalo, J.M.G., Ma, J., & Cacioppo, J.T. (2015). Myeloid differentiation architecture of leukocyte transcriptome dynamics in perceived social isolation. *Proceedings of the National Academy of Sciences, 112*(49), 15142-1547. Available online: https://doi.org/10.1073/pnas.1514249112

Conroy, R.M., Golden, J., Jeffares, I., O'Neill, D., & McGee, H. (2010). Boredom-proneness, loneliness, social engagement and depression and their association with cognitive function in older people: A population study. *Psychology, Health and Medicine, 15*(4), 463-473.

Copeland, B. (2018, February 14). What it's like to be young and extremely lonely in a big city. *VICE*. Available online: https://www.vice.com/en_ca/article/3k5meb/what-its-like-to-be-young-and-extremely-lonely-in-a-big-city

Coplan, R.J., Ooi, L.L., & Baldwin, D. (2018). Does it matter when we want to be alone? Exploring development timing effects in the implications of unsociability. *New Ideas in Psychology*, e-print ahead of publication.

Cotton, S.R., Anderson, W.A., & McCullough, B.M. (2013). Impact of Internet use on loneliness and contact with others among older adults: Cross-sectional analysis. *Journal of Medical Internet Research, 15*(2), e39. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3636305/

Courtin, E., & Knapp, M. (2017). Social isolation, loneliness and health in old age: A scoping review. *Health & Social Care in the Community, 25*(3), 799-812. Available online: http://dx.doi.org/10.1111/hsc.12311

Coyle, C.E., & Dugan, E. (2012). Social isolation, loneliness and health among older adults. *Journal of Aging & Health, 24*(8), 1346-1363.

Crane, B. (2017, March 30). The virtues of isolation. *The Atlantic*. Available online: https://www.theatlantic.com/health/archive/2017/03/the-virtues-of-isolation/521100/

Creswell, J.D., Irwin, M.R., Burklund, L.J., Lieberman, M.D., Arevalo, J.M., Ma, J., Breen, E.C., & Cole, S.W. (2012). Mindfulness-based stress reduction training reduces loneliness and pro-inflammatory gene expression in older adults: A small randomized controlled trial. *Brain, Behavior, and Immunity, 26*(7), 1095-1101. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3635809/

Cumming, E., & Henry, W.H. (1961). *Growing old: The process of disengagement*. New York, NY: Basic books.

Czaja, S. (2018). The role of technology in supporting social engagement among older adults. *Public Policy & Aging Report, 27*(4), 145-148.

Dahlberg, L. (2007). The enigmatic phenomenon of loneliness. *International Journal of Qualitative Studies on Health and Well-being, 2*(4), 195-207. Available online: https://doi.org/10.1080/17482620701626117

Dahlberg, L., Agahi, N., & Lennartsson, C. (2018). Lonelier than ever? Loneliness of older people over two decades. *Archives of Gerontology and Geriatrics, 75*, 96-103. Available online: https://doi.org/10.1016/j.archger.2017.11.004

Dahlberg, L., Andersson, L., McKee, K.J., & Lennartsson, C. (2015). Predictors of loneliness among older women and men in Sweden: A national longitudinal study. *Aging & Mental Health*, *19*(5), 409-417.

Dahlberg, L., & McKee, K.J. (2014). Correlates of social and emotional loneliness in older people: Evidence from an English community study. *Aging & Mental Health*, *18*(4), 504-514. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3979439/

Danese, A., Moffitt, T.E., Harrington, H., Milne, B. J., Polanczyk, G., Pariante, C.M., Poulton, R., & Caspi, A. (2009). Adverse childhood experiences and adult risk factors for age-related disease. *Archives of Pediatrics and Adolescent Medicine, 163*(12), 1135-1143. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3560401/

de Jong Gierveld, J. (1987). Developing and testing a model of loneliness. *Journal of Personality & Social Psychology, 53*(1), 119-128.

de Jong Gierveld, J., & Fokkema, T. (1998). Geographical differences in support networks of older adults. *Tijdschrift voor Economische en Sociale Geografie, 89*(3), 328-336.

de Jong Gierveld, J., & Fokkema, T. (2015). Strategies to prevent loneliness. In A. Shaked and A. Rokach (Eds.), *Addressing loneliness: Coping, prevention and clinical interventions* (pp. 218-230). New York, NY: Routledge. Available online: https://pure.knaw.nl/ws/files/1627341/2015_Gierveld_en_Fokkema_loneliness_prevention_ch_in_book_post_print_version_0023.pdf

de Jong Gierveld, J., Fokkema, T., & van Tilburg, T.G. (2011). Alleviating loneliness among older adults: Possibilities and constraints of interventions. In *Safeguarding the convoy: A call to action from the Campaign to End Loneliness* (pp. 41-45). London, UK: Campaign to End Loneliness. Available online: https://www.researchgate.net/publication/227944432_Alleviating_loneliness_among_older_adults_Possibilities_and_constraints_of_interventions

de Jong Gierveld, J., & Havens, B. (2004). Cross-national comparisons of social isolation and loneliness: Introduction and overview. *Canadian Journal on Aging, 23*(2), 109-113. Available online: https://www.semanticscholar.org/paper/Cross-national-comparisons-of-social-isolation-and-Gierveld-Havens/88a7ea202c8dafc60ed5b15b7975e82b1c929ed1

de Jong Gierveld, J., & Kamphuis, F.H. (1985). The development of a Rasch-type loneliness scale. *Applied Psychological Measurement, 9*(3), 289-299. Available online: https://conservancy.umn.edu/handle/11299/102185

de Jong Gierveld, J., Keating, N., & Fast, J. E. (2015). Determinants of loneliness among older adults in Canada. *Canadian Journal on Aging, 34*(2), 125-136.

de Jong Gierveld, J., & Raadschelders, J. (1982). Types of loneliness. In L.A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 105-119). New York: Wiley.

de Jong Gierveld, J., & Tesch-Romer, C. (2012). Loneliness in old age in Eastern and Western European societies: Theoretical perspectives. *European Journal on Aging, 9*(4), 285-295. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5549113/

de Jong Gierveld, J., van der Pas, S., & Keating, N. (2015). Loneliness of older immigrant groups in Canada: Effects of ethnic-cultural background. *Journal of Cross-Cultural Gerontology*, *30*(3), 251-268.

de Jong Gierveld, J., van Groenou, M.B., Hoogendoorn, A.W., & Smit, J.H. (2009). Quality of marriages in later life and emotional and social loneliness. *Journals of Gerontology Series B: Psychological and Social Sciences, 64*(4), 497-506. Available online: https://doi.org/10.1093/geronb/gbn043

de Jong Gierveld, J., & van Tilburg, T.G. (2017). *Manual of the Loneliness Scale*. Amsterdam: Vrije Universiteit. Available online: http://home.fsw.vu.nl/tg.van.tilburg/manual_loneliness_scale_1999.html

de Jong Gierveld, van Tilburg, T.G., & Dykstra, P. (2016). New ways of theorizing and conducting research in the field of loneliness and social isolation. In A. Vagelisti and D. Perlman (Eds.), *The Cambridge Handbook of Personal Relationships, 2nd*

revised edition. New York, NY: Cambridge University Press. Available online: https://repub.eur.nl/pub/93235/

DePaulo, B. (2006). *Singled out: How singles are stereotyped, stigmatized, and ignored… and still live happily ever after*. New York, NY: St. Martin's.

DePaulo, B. (2018, August 28). Single people aren't to blame for the loneliness epidemic. *The Atlantic*. Available online: https://www.theatlantic.com/family/archive/2018/08/single-people-arent-to-blame-for-the-loneliness-epidemic/568786/

DeWall, C., MacDonald, G., Webster, G., Masten, C., Baumeister, R., Powell, C., Combs, D., Schurtz, D.R., Stillman, T.F., Tice, D.M., & Eisenberger, N. (2010). Acetaminophen reduces social pain: Behavioral and neural evidence. *Psychological Science, 21*(7), 931-937. Available online: https://www.researchgate.net/publication/44673230_Acetaminophen_Reduces_Social_Pain_Behavioral_and_Neural_Evidence

DeWall, C.N., Twenge, J.M., Gitter, S.A., & Baumeister, R.F. (2009). It's the thought that counts: The role of hostile cognition in shaping aggressive responses to social exclusion. *Journal of Personality & Social Psychology, 96*(1), 45-59. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2775524/

Dickens, A., Richards, S., Greaves, C., & Campbell, J. (2011). Interventions targeting social isolation in older people: A systematic review. *BMC Public Health, 11*(1), 1-22. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3170621/

Dill, J.C., & Anderson, C.A. (1999). Loneliness, shyness, and depression: The etiology and interrelationships of everyday problems in living. In T. Joiner & J.C. Coyne (Eds.), *The interactional nature of depression: Advances in interpersonal approaches* (pp. 92-125). Washington, DC: American Psychological Association.

DiTommaso, E., Fizell, S. R., & Robinson, B. A. (2015). Chronic loneliness within an attachment framework: Processes and interventions. In A. Shaked and A. Rokach (Eds.), *Addressing loneliness: Coping, prevention and clinical interventions.* New York, NY: Routledge.

Dong, X., Chang, E-S., Wong, E., & Simon, M. (2012). Perception and negative effect of loneliness in a Chicago Chinese population of older adults. *Archives of Gerontology and Geriatrics, 54*(1), 151-159. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3173589/

Dong, X., Simon, M.A., Gorbien, M., Percak, J., & Golden, R. (2007). Loneliness in older Chinese adults: A risk factor for elder mistreatment. *Journal of the American Geriatrics Society, 55*(11), 1831-1835.

Downs, A. (2012). *The velvet rage: Overcoming the pain of growing up gay in a straight man's world* (2nd revised ed.). New York, NY: Da Capo Lifelong Books.

Doyle, C., & Goldingay, S.J. (2012). The rise of the 'silver surfer': Online social networking and social inclusion for older adults. *Journal of Social Inclusion, 3*(2),

40-52. Available online: https://josi.journals.griffith.edu.au/index.php/inclusion/article/view/223

Drageset, J., Eide, G.E., Dysvik, E., Furnes, B., & Hauge, S. (2015). Loneliness, loss, and social support among cognitively intact older people with cancer, living in nursing homes: A mixed-methods study. *Clinical Interventions in Aging, 10*, 1529-1536. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4590337/

Drageset, J., Kirkevold, M., & Espehaug, B. (2011). Loneliness and social support among nursing home residents without cognitive impairment: A questionnaire survey. *International Journal of Nursing Studies, 48*(5), 611-619.

Drennan, J., Treacy, M., Butler, M., Byrne, A., Fealy, G., Frazer, K., & Irving, K. (2008). The experience of social and emotional loneliness among older people in Ireland. *Ageing and Society, 28*(8), 1113-1132. Available online: https://eprints.soton.ac.uk/358474/

Duitsland Nieuws (2014, June 24). German postmen will soon make a paid chat with seniors. Available online: https://www.duitslandnieuws.nl/blog/2014/06/24/duitse-postbodes-maken-straks-betaald-praatje-met-senioren/

Dunbar, R.I.M. (1992). Neocortex size as a constraint on group size in primates. *Journal of Human Evolution, 22*(6), 469-493. Available online: https://pdfs.semanticscholar.org/ec4b/d845dae9c5b9b006a198a39d6709030c714d.pdf or https://www.scribd.com/document/157994091/Neocortex-Size-as-a-Constraint-on-Group-Size-in-Primates-Dunbar

Dykstra, P.A. (2009). Older adult loneliness: Myths and realities. *European Journal on Aging, 6*(2), 91-100. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2693783/

Dykstra, P.A., & de Jong Gierveld, J. (2004). Gender and marital-history differences in emotional and social loneliness among Dutch older adults. *Canadian Journal on Aging*, *23*(2), 141-155. Available online: https://www.researchgate.net/publication/8377240_Gender_and_Marital-History_Differences_in_Emotional_and_Social_Loneliness_Among_Dutch_Older_Adults

Dykstra, P.A., & Fokkema, T. (2007). Social and emotional loneliness among divorced and married men and women. *Basic and Applied Social Psychology, 29*(1), 1-12. Available online: https://www.nidi.knaw.nl/shared/content/output/2007/basp-29-01-dykstra.pdf

Dykstra, P.A., van Tilburg, T.G., & de Jong Gierveld, J. (2005). Changes in older adult loneliness: Results from a seven-year longitudinal study. *Research on Aging, 27*(6), 725-747. Available online: https://research.vu.nl/ws/portalfiles/portal/2079788

Earnshaw, J. (2016, August 4). Aging inmates: Photographer shines light on loneliness and isolation. *National Geographic*. Available online:

https://www.nationalgeographic.com/photography/proof/2016/07/aging-in-prison--photographer-shines-light-on-loneliness-and-soc/

Eisenberger, N.I. (2012a). The neural bases of social pain: Evidence for shared representations with physical pain. *Psychosomatic Medicine, 74*, 126-135. Available online: https://sanlab.psych.ucla.edu/wp-content/uploads/sites/31/2015/05/Eisenberger2012PsychosamaticMed.pdf

Eisenberger, N.I. (2012b). The pain of social disconnecton: Examining the shared neural underpinnings of physical and social pain. *Nature Review Neuroscience, 13*(6), 421-434.

Elmer, E.M. (2015, October 25). Loneliness interventions for older adults in perpetually isolating environments. Presentation at the 44th Annual Meeting of the Canadian Association on Gerontology, Calgary, AB.

Elmer, E.M. (2018, August). Loneliness among lesbian, gay, and bisexual individuals: Coping from a meaning-centered perspective. Paper to be presented at the 10th Biennial International Meaning Conference, Vancouver, BC.

Elmer, E.M., van Tilburg, T.G., & Fokkema, T. (2018, March 28). Marginalization and loneliness among older LGB adults: Minority stress and social anxiety as mediators. Poster presented at the 64th Annual Meeting of the American Society on Aging, San Francisco, CA.

Eloranta, S., Arve, S., Isoaho, H., Lehtonen, A., & Viitanen, M. (2015). Loneliness of people aged 70: A comparison of two Finnish cohorts born 20 years apart. *Archives of Gerontology & Geriatrics, 61*(2), 254-260.

Elovainio, M., Hakulinen, C., Pulkki-Råback, L., Virtanen, M., Josefsson, K., Jokela, M., Vahtera, J., & Kivimaki, M. (2017). Contribution of risk factors to excess mortality in isolated and lonely individuals: An analysis of data from the UK Biobank Cohort Study. *The Lancet Public Health, 2*(6), e260-266. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5463031/

Entis, L. (2016, June 22). Chronic loneliness is a modern-day epidemic. *Fortune*. Available online: http://fortune.com/2016/06/22/loneliness-is-a-modern-day-epidemic/

Epley, N., Akalis, S., Waytz, A., & Cacioppo, J.T. (2008). Creating social connection through inferential reproduction: Loneliness and perceived agency in gadgets, gods, and greyhounds. *Psychological Science, 19*(2), 114-120. Available online: http://faculty.chicagobooth.edu/nicholas.epley/EpleyAkalisWaytzCacioppo.pdf

Epley, N., & Schroeder, J. (2014). Mistakenly seeking solitude. *Journal of Experimental Psychology: General, 143*(5), 1980-1999. Available online: http://faculty.chicagobooth.edu/nicholas.epley/EpleySchroederJEPG2014.pdf

Epley, N., Waytz, A., & Cacioppo, J.T. (2008). On seeing human: A three-factor theory of anthropomorphism. *Psychological Review, 114*(4), 864-886. Available online: http://adamwaytz.com/journal-articles/on-seeing-human-pdf

Eriksson, K. (1992). The alleviation of suffering: The idea of caring. *Scandinavian Journal of Caring Sciences, 6*(2), 119-123.

Ettema, E.J., Derksen, L.D., & van Leeuwen, E. (2010). Existential loneliness and end-of-life care: A systematic review. *Theoretical Medicine and Bioethics, 31*(2), 141-169. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2866502/

Everett-Haynes, M. (2010, June 18). Loneliness, poor health appear to be linked. University of Arizona. Available online: https://sbs.arizona.edu/news/loneliness-poor-health-appear-be-linked

Expatica (2007, September 13). Dutch take practical approach to reduce loneliness. Available online: https://www.expatica.com/nl/insider-views/Dutch-take-practical-approach-to-reduce-loneliness_100666.html

Eysenck, H.J. (1967). *The biological basis of personality*. Springfield, Illinois: Thomas.

Falletta, L., & Dannefer, D. (2014). The life course and the social organization of age. In McLeod, J. D., Lawler, E. J., & Schwalbe, M. (Eds.), *Handbook of the social psychology of inequality* (pp. 607-625). New York, NY: Springer

Farooqui, S. (2017, August 17). Group of Western University music students to live in retirement home. *The Toronto Star*. Available online: https://www.thestar.com/news/canada/2017/08/17/group-of-western-university-music-students-to-live-in-retirement-home.html

Feinstein, B.A., Hershenberg, R., Bhatia, V., Latack, J.A., Meuwly, N., & Davila, J. (2013). Negative social comparison on Facebook and depressive symptoms: Rumination as a mechanism. *Psychology of Popular Media Culture*, *2*(3), 161-170.

Fergusson, M. (2018, February/March). In solitude what happiness? *The Economist 1843 Magazine*. Available online: https://www.1843magazine.com/features/in-solitude-what-happiness

Ferreira-Alves, J., Magalhães, P., Viola, L., & Simoes, R. (2014). Loneliness in middle and old age: Demographics, perceived health, and social satisfaction as predictors. *Archives of Gerontology and Geriatrics, 59*(3), 613-623.

Findlay, R. (2003). Interventions to reduce social isolation among the elderly: Where is the evidence? *Ageing and Society, 23*(5), 647-658. Available online: https://pdfs.semanticscholar.org/a29b/f12cfcd8dafc84043332dedc7a220571e17b.pdf

Fischer, C.S. (2011). *Still connected: Family and friends in America since 1970*. New York, NY: Russell Sage.

Fischer, C.S. (2012, April 23). The loneliness scare: Isolation isn't a growing problem. *The Boston Review*. Available online: http://bostonreview.net/Fischer-loneliness-modern-culture

Flowers, L., Houser, A., Noel-Miller, C., Shaw, J., Battacharya, J., Schoemaker, L., & Farid, M. (2017). Medicare spends more on socially isolated older adults. *Insight on*

the Issues, 125, 1-5. Available online: https://www.aarp.org/ppi/info-2017/medicare-spends-more-on-socially-isolated-older-adults.html

Fokkema, T., de Jong Gierveld, J., & Dykstra, P.A. (2012). Cross-national differences in older adult loneliness. *The Journal of Psychology, 146*(1-2), 201-228. Available online: https://www.researchgate.net/publication/221804288_Cross-National_Differences_in_Older_Adult_Loneliness

Fokkema, T., & Knipscheer, K. (2007). Escape loneliness by going digital: A quantitative and qualitative evaluation of a Dutch experiment in using ECT to overcome loneliness among older adults. *Aging & Mental Health, 11*(5), 496-504. Available: https://www.researchgate.net/publication/5959752_Escape_Loneliness_by_Going_Digital_A_Quantitative_and_Qualitative_Evaluation_of_a_Dutch_Experiment_in_Using_ECT_to_Overcome_Loneliness_Among_Older_Adults

Fokkema, T., & Naderi, R. (2013). Differences in late-life loneliness: A comparison between Turkish and native-born older adults in Germany. *European Journal of Ageing, 10*(4), 289-300. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5549205/

Fratiglioni, L., Paillard-Borg, S., & Winblad, B. (2004). An active and socially integrated lifestyle in late life might protect against dementia.*The Lancet Neurology*, 3(6), 343-353. Available online: https://pdfs.semanticscholar.org/f873/26a44a54cd579b755644f5ae89d40acd592a.pdf

Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Muraco, A., Erosheva, E. A., Hoy-Ellis, C. P., Goldsen, J., & Petry, H. (2011). *The aging and health report: Disparities and resilience among lesbian, gay, bisexual, and transgender older adults*. Seattle: Institute for Multigenerational Health. Available online: http://www.age-pride.org/wordpress/wp-content/uploads/2011/05/Full-Report-FINAL-11-16-11.pdf

Fromm-Reichmann, F. (1959). Loneliness. *Psychiatry, 22*(1), 1-15.

Fry, P.S., & Debats, D.L. (2002). Self-efficacy beliefs as predictors of loneliness and psychological distress in older adults. *International Journal of Human Development, 55*(3), 233-269.

Fukada, S. (2018, March 16). Japan's prisons are a haven for elderly women: Lonely seniors are shoplifting in search of the community and stability of jail. *Bloomberg*. Available online: https://www.bloomberg.com/news/features/2018-03-16/japan-s-prisons-are-a-haven-for-elderly-women

Gao, J., Davis, L.K., Hart, A.B., Sanchez-Roige, S., Han, L., Cacioppo, J.T., & Palmer, A.A. (2017). Genome-wide association study of loneliness demonstrates a role for common variation. *Neuropsychopharmacology, 42*(4), 811-821. Available online: https://escholarship.org/uc/item/9751w1kb

Galbraith, B., Larkin, H., Moorhouse, A., & Oomen, T. (2015). Intergenerational programs for people with dementia. *Journal of Gerontological Social Work, 58*(4), 357-378.

Gale, C.R., Westbury, L., & Cooper, C. (2017). Social isolation and loneliness as risk factors for the progression of frailty: The English Longitudinal Study of Ageing. *Age and Ageing*. Advance online publication. Available online: https://academic.oup.com/ageing/advance-article/doi/10.1093/ageing/afx188/4772155

Gardiner, C., Geldenhuys, G., & Gott, M. (2016). Interventions to reduce social isolation and loneliness among older people: An integrative review. *Health and Social Care in the Community, 52*(6), 627-638. Available online: https://www.researchgate.net/publication/305343177_Interventions_to_reduce_social_isolation_and_loneliness_among_older_people_an_integrative_review

Gawande, A. (2009, March 30). Is long-term solitary confinement torture? *The New Yorker*. Available online: https://www.newyorker.com/magazine/2009/03/30/hellhole

Gerst-Emerson, K., & Jayawardhana, J. (2015). Loneliness as a public health issue: The impact of loneliness on health care utilization among older adults. *American Journal of Public Health, 105*(5), 1013-1019. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4386514/

Ghonaim, H. (2017, October 5). Meet the Ontario university students living with more than 100 seniors in a care home. *CBC News London*. Available online: http://www.cbc.ca/news/canada/london/western-university-students-live-in-retirement-home-1.4329736

Gifford, R. (2007). The consequences of living in high-rise buildings. *Architectural Science Review, 50*(1), 2-17. Available online: https://www.researchgate.net/profile/Robert_Gifford3/publication/233490985_The_Consequences_of_Living_in_High-Rise_Buildings/links/0c960534a04f625bc1000000/The-Consequences-of-Living-in-High-Rise-Buildings.pdf

Gill, S.D., Hogg, T., Dolley, P.J. (2016). Loneliness during inpatient rehabilitation: Results of a qualitative study. *International Journal of Rehabilitation Research, 39*(1), 84-86.

Giuli, C., Spazzafumo, L., Sirolla, C., Abbatecola, A.M., Lattanzio, F., & Postacchini, D. (2012). Social isolation risk factors in older hospitalized individuals. *Archives of Gerontology & Geriatrics, 55*(3), 580-585.

Givetash, L. (2017, November 14). Fighting loneliness with a community of seniors. *The Tyee*. Available online: https://thetyee.ca/News/2017/11/14/fighting-loneliness-communitys-eniors/

Givetash, L. (2018a, January 18). UK 'loneliness minister' puts spotlight on issue Canada also needs to tackle. *The National Post*. Available online: http://nationalpost.com/pmn/news-pmn/canada-news-pmn/u-k-loneliness-minister-puts-spotlight-on-issue-canada-also-needs-to-tackle

Givetash, L. (2018b, February 27). Vancouver group looks to break down social barriers among seniors. *The Globe and Mail.* Available online:

https://www.theguardian.com/world/2017/apr/04/vancouver-loneliness-engaged-city-taskforce-canada

Gold, K. (2018, July 19). Vancouver residents feel unwelcome as privately-owned public spaces spread. *The Globe and Mail*. Available online: http://www.vancouverseniorsadvisory.ca/2018/07/access-to-privately-owned-public-spaces/

Goll, J.C., Charlesworth, G., Scior, K., & Stott, J. (2015). Barriers to social participation among lonely older adults: The influence of social fears and identity. *PLOS One, 10*(2): e0116664. Available online: https://doi.org/10.1371/journal.pone.0116664

Goodman, A., Adams, A., & Swift, H.J. (2015). *Hidden citizens: How can we identify the most lonely older adults?* London, UK: Campaign to End Loneliness. Available online: https://www.campaigntoendloneliness.org/wp-content/uploads/CEL-Hidden-People-report-final.pdf

Goodwin, R., Cook, O., & Yung, Y. (2001). Loneliness and life satisfaction among three cultural groups. *Personal Relationships, 8*(2), 225-230. Available online: https://core.ac.uk/download/pdf/334826.pdf

Goossens, L., van Roekel, E., Verhagen, M., Cacioppo, J., Cacioppo, S., Maes, M., & Boomsma, D. (2015). The genetics of loneliness: Linking evolutionary theory to genome-Wide genetics, epigenetics, and social science. *Perspectives on Psychological Science, 10*(2), 213-226. Available online: https://www.researchgate.net/publication/275333868_The_Genetics_of_Loneliness_Linking_Evolutionary_Theory_to_Genome-Wide_Genetics_Epigenetics_and_Social_Science

Grafstrom, M., Nordberg, A., & Winblad, B. (1993). Abuse is in the eye of the beholder: Report by family members about abuse of demented persons in home care. *Scandinavian Journal of Social Medicine, 21*(4), 247-255.

Graneheim, U.H., Lundman, B. (2010). Experiences of loneliness among the very old: The Umeä 85+ Project. *Aging & Mental Health, 14*(4), 433-438.

Green, J. (2017, July 10). The retired couple that made Uber more senior-friendly. *Bloomberg Business Week*. Available online: https://www.bloomberg.com/news/articles/2017-07-10/the-retired-couple-that-made-uber-more-senior-friendly

Greene, M., Hessol, N.A., Perissinotto, C., Zepf, R., Hutton Parrott, A., Foreman, C., Whirry, R., Gandhi, M., & John, M. (2018). Loneliness in older adults living with HIV. *AIDS and Behavior*. Advance online publication. Available online: https://www.researchgate.net/publication/321151893_Loneliness_in_Older_Adults_Living_with_HIV

Greysen, S. R., Horwitz, L. I., Covinsky, K. E., Gordon, K., Ohl, M. E., & Justice, A. C. (2013). Does social isolation predict hospitalization and mortality among HIV+ and uninfected older veterans? *Journal of the American Geriatrics Society, 61*(9), 1456-1463. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3773301/

Guasp, A. (2011). *Lesbian, gay & bisexual people in later life*. London, UK: Stonewall. Available online: https://www.stonewall.org.uk/sites/default/files/LGB_people_in_Later_Life__2011_.pdf

Gupta, S. (2014, February 18). Just say hello: The powerful new way to combat loneliness. *O: The Oprah Magazine*. Available online: http://www.oprah.com/health/just-say-hello-fight-loneliness/all

Gustafsson, T., Isacson, D., Thorslund, M., & Sörbom, D. (1996). Factors associated with psychotropic drug use among the elderly living at home. *Journal of Applied Gerontology, 15*(2), 238-254.

Hafner, K. (2016, September 5). Researchers confront an epidemic of loneliness. *The New York Times*. Available online: https://www.nytimes.com/2016/09/06/health/lonliness-aging-health-effects.html

Hajek, A., & Konig, H.H. (2017). The association of falls with loneliness and social exclusion: Evidence from the DEAS German Ageing Survey. *BMC Geriatrics, 17,* 204. Available online: https://doi.org/10.1186/s12877-017-0602-5

Hannon, K. (2015, March 19). Why we need to get rid of senior centers. *Forbes*. Available online: https://www.forbes.com/sites/nextavenue/2015/03/19/why-we-need-to-get-rid-of-senior-centers/

Hansen, T., & Slagsvold, B. (2016). Late-life loneliness in European countries: Results from the Generations and Gender Survey. *Social Indicators Research, 129*(1), 445-464.

Harris, M. (2017). *Solitude: A singular life in a crowded world.* Toronto: Doubleday.

Hartmann, T. (2016). Parasocial interaction, parasocial relationships, and well-being. In L. Reinecke & M.B. Oliver (Eds.), *The Routledge Handbook of Media Use and Well-Being: International Perspectives on Theory and Research on Positive Media Effects* (pp. 131-144). New York, NY: Routledge. Available online: https://www.researchgate.net/publication/321586609_Parasocial_Interaction_Parasocial_Relationships_and_Well-Being

Hauge, S., & Kirkevold, M. (2010). Older Norwegians' understanding of loneliness. *International Journal of Qualitative Studies in Health and Well-being, 5*(1), 10.3402/qhw.v5i1.4654. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2879870/

Hauge, S., & Kirkevold, M. (2012). Variations in older persons' descriptions of the burden of loneliness. *Scandinavian Journal of Caring Sciences, 26*(3), 553-560.

Havelaar, R. (2016a). Across Europe, the postman helps to overcome loneliness. Amsterdam Smart City. Available online: https://amsterdamsmartcity.com/posts/across-europe-the-postman-helps-to-overcome-loneliness

Havelaar, R. (2016b). Managing the public space using daily insights: The mailman collects data. Amsterdam Smart City. Available online:

https://amsterdamsmartcity.com/posts/managing-the-public-space-using-daily-insights-the-mailman-collects-data

Havens, B., Hall, M., Sylvestre, G. & Jivan, T. (2004). Social isolation and loneliness: Differences between older rural and urban Manitobans. *Canadian Journal on Aging, 23*(2), 129-140.

Hawkley, L.C., Browne, M.W., & Cacioppo, J.T. (2005). How can I connect with thee? Let me count the ways. *Psychological Science, 16*(10), 798-804.

Hawkley, L.C, & Cacioppo, J.T. (2007). Aging and loneliness: Downhill quickly? *Current Directions in Psychological Science, 16*(4), 187-191. Available online: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.729.3139&rep=rep1&type=pdf

Hawkley, L.C. & Cacioppo, J.T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine, 40*(2), 218-227. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3874845/

Hawkley, L.C., & Capitanio, J.P. (2015). Perceived social isolation, evolutionary fitness and health outcomes: A lifespan approach. *Philosophical Transactions of the Royal Society of London B, 370*(1669), 20140114. Available online: https://doi.org/10.1098/rstb.2014.0114

Hawkley, L.C., Gu, Y., Luo, Y.-J., & Cacioppo, J. T. (2012). The mental representation of social connections: Generalizability extended to Beijing adults. *PLoS ONE, 7*(9): e44065. Available online: https://doi.org/10.1371/journal.pone.0044065

Hawkley, L.C., Hughes, M.E., Waite, L.J., Masi, C.M., Thisted, R.A., & Cacioppo, J.T. (2008). From social structural factors to perceptions of relationship quality and loneliness: The Chicago Health, Aging, and Social Relations Study. *The Journals of Gerontology, Series B, Psychological Sciences and Social Sciences*, *63*(6), S375-384. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2769562/

Hawkley, L.C., & Kocherginsky, M. (2017). Transitions in loneliness among older adults: A 5-year follow-up in the National Social Life, Health, and Aging Project. *Research on Aging*. Advance online publication.

Hawkley, L.C., Preacher, K.J., & Cacioppo, J.T. (2010). Loneliness impairs daytime functioning but not sleep duration. *Health Psychology, 29*(2), 124-129. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2841303/

Hawkley, L.C., Thisted, R.A., & Cacioppo, J.T. (2009). Loneliness predicts reduced physical activity: Cross-sectional & longitudinal analyses. *Health Psychology, 28*(3), 354-363. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2791498/

Hawton, A., Green, C., Dickens, A., Richards, S., Taylor, R., Edwards, R., Colin, G. & Campbell, J., (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.

Hayes, S.C., Strosahl, K.D., & Wilson, K.G. (2016). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). New York: Guilford.

Heffner, K. L., Waring, M. E., Roberts, M. B., Eaton, C. B., & Gramling, R. (2011). Social isolation, C-reactive protein, and coronary heart disease mortality among community-dwelling adults. *Social Science & Medicine*, 72(9), 1482-1488. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3090468/

Heikkinen R.L., & Kauppinen M. (2011). Mental well-being: A 16-year follow-up among older residents in Jyväskylä. *Archives of Gerontology and Geriatrics*, *52*(1), 33-39.

Heravi-Karimooi, M., Anoosheh, M., Foroughan, M., Sheykhi, T.S., & Hajizadeh, E. (2010). Understanding loneliness in the lived experience of Iranian elders. *Scandinavian Journal of Caring Sciences, 24*(2), 274-280.

Heravi-Karimooi, M., Rejeh, N., Foroughan, M., & Vaismoradi, M. (2012). Experience of loneliness in iranian abused elders: Loneliness in Iranian abused elders. *International Nursing Review, 59*(1), 139-145.

Herrmann, D., Sipsas-Herrmann, A., Stafford, M., & Herrmann, N. (2005). Benefits and risks of intergenerational program participation by senior citizens. *Educational Gerontology, 31*(2), 123-138.

Het Nieuwsblad (February 27, 2015). Postmen are looking for lonely seniors. Available online: https://www.nieuwsblad.be/cnt/dmf20150226_01551184

Hicks, T.J., Jr. (2000). What is your life like now? Loneliness and elderly individuals residing in nursing homes. *Journal of Gerontological Nursing, 26*(8), 15-19.

Hobbes, M. (2017, March 2). Together alone: The epidemic of gay loneliness. *Huffington Post - Highline*. Available online: http://highline.huffingtonpost.com/articles/en/gay-loneliness/

Holt-Lunstad, J. (2018a). The potential public health relevance of social isolation and loneliness: Prevalence, epidemiology, and risk factors. *Public Policy & Aging Report, 27*(4), 127-130. Available online: https://doi.org/10.1093/ppar/prx030

Holt-Lunstad, J. (2018b). Why social relationships are important for health: A systems approach to understanding and modifying risk and protection. *Annual Review of Psychology, 69,* 437-458.

Holt-Lunstad, J., Robles, T.F., & Sbarra, D.A. (2017). Advancing social connection as a public health priority in the United States. *American Psychologist, 72*(6), 517-530. Available online: https://www.apa.org/pubs/journals/releases/amp-amp0000103.pdf

Holt-Lunstad, J., & Smith, T.B. (2017). Loneliness and social isolation as risk factors for CVD: Implications for evidence-based patient care and scientific inquiry. *Heart, 102*(13), 987-989. Available online: http://dx.doi.org/10.1136/heartjnl-2015-309242

Holt-Lunstad, J., Smith, T.B., Baker, M., Harris, T. & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science, 10*(2), 227-237. Available online: https://www.ahsw.org.uk/userfiles/Research/Perspectives%20on%20Psychological%20Science-2015-Holt-Lunstad-227-37.pdf

Holt-Lunstad, J., Smith, T.B., & Layton, J.B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine, 7*(7): e1000316. Available online: https://doi.org/10.1371/journal.pmed.1000316

Holwerda, T. J., Beekman, A.T.F., Deeg, D.J.H., Stek, M.L., van Tilburg, T.G., Visser, P.J., & Schoevers, R.A. (2012). Increased risk of mortality associated with social isolation in older men: Only when feeling lonely? Results from the Amsterdam Study of the Elderly. *Psychological Medicine, 42(4)*, 843-853. Available online: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.964.3350&rep=rep1&type=pdf

Holwerda, T., Deeg, D., Beekman, A., Van Tilburg, T., Stek, M., Jonker, C., & Schoevers, R. (2014). Feelings of loneliness, but not social isolation, predict dementia onset: Results from the amsterdam study of the elderly (AMSTEL).*Journal of Neurology, Neurosurgery and Psychiatry, 85*(2), 135-142. Available online: https://www.researchgate.net/profile/Theo_Van_Tilburg/publication/233900548_Feelings_of_loneliness_but_not_social_isolation_predict_dementia_onset_Results_from_the_Amsterdam_Study_of_the_Elderly_AMSTEL/links/0912f50e451ff8592a000000/Feelings-of-loneliness-but-not-social-isolation-predict-dementia-onset-Results-from-the-Amsterdam-Study-of-the-Elderly-AMSTEL.pdf

Honigh-de Vlaming, R., Haveman-Nies, A., Bos-Oude Groeniger, I., Groot, D., & Veer, V. (2014). Determinants of trends in loneliness among Dutch older people over the period 2005-2010. *Journal of Aging and Health, 26*(3), 422-440. Available online: https://www.researchgate.net/publication/259877817_Determinants_of_Trends_in_Loneliness_Among_Dutch_Older_People_Over_the_Period_2005-2010

Honigh-de Vlaming, R., Haveman-Nies, A., Heinrich, J., van't eer, P., & de Groot, L. (2013). Effect evaluation of a two-year complex intervention to reduce loneliness in non-institutionalised elderly Dutch people. *BMC Public Health, 13*(1), 1-13. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4015556/

Hortulanus, R. P., Machielse, A., & Meeuwesen, L. (2006). *Social isolation in modern society*. Abingdon, UK: Routledge.

House, J.S., Landis, K.R., & Umberson, D. (1988). Social relationships and health. *Science, 29*(241), 540-545. Available online: https://www.researchgate.net/publication/19756223_Social_Relationships_and_Health

Howard, J. (2017, November 1). Robot pets offer real comfort. *CNN on Japan*. Available online: https://www.cnn.com/2016/10/03/health/robot-pets-loneliness/index.html

Huang, S. (2006). A study of outdoor interactional spaces in high-rise housing. *Landscape and Urban Planning, 78*(3), 193-204. Available online: https://www.researchgate.net/publication/236144214_A_study_of_outdoor_interactional_spaces_in_high-rise_housing

Hughes, M. E., Waite, L. J., Hawkley, L. C., & Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Research on Aging, 26*(6), 655-672. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2394670/

Ianzito, C. (2018, July). Isolation and loneliness: Voice-activated technology might help. *AARP Bulletin*. Available online: https://www.aarp.org/home-family/personal-technology/info-2018/isolation-loneliness-technology-help.html

Imamoglu, E.O., Kuller, R., Imamoglu, V., & Kuller, M. (1993) The social psychological worlds of Swedes and Turks in and around retirement. *Journal of Cross-cultural Psychology 24*(1), 26-41.

Independent Age UK (2016, November 15). One-third of older people say feelings of loneliness are out of their control. Available online: https://www.independentage.org/news-media/press-releases/one-third-of-older-people-say-feelings-of-loneliness-are-out-of-their

Institute of Medicine (2011). *The health of lesbian, gay, bisexual, and transgender people*. Washington, DC: National Academies Press. Available online: https://www.ncbi.nlm.nih.gov/books/NBK64806/

InWithForward (2019). *City of Vancouver Healthy City Strategy Quick Dive*. Vancouver, BC: Author. Available online: https://inwithforward.com/2019/02/convivial-city-2020/

Jacobs, E. (2017, June 7). When loneliness at work drives employees to quit their jobs. *The Financial Times*. Available online https://www.ft.com/content/a10a3d60-461e-11e7-8519-9f94ee97d996

Jersey Evening Post (2015, February 3). Jersey Post's award-winning welfare scheme about to go worldwide. Available online: https://jerseyeveningpost.com/news/2015/02/03/jersey-posts-award-winning-welfare-scheme-about-to-go-worldwide/

Johnson, K. (2018). GoGoGrandparent lets elderly call an Uber without a smartphone. Available online: https://senior.com/gogograndparent-lets-elderly-call-uber-without-smartphone/

Jonason, P.K., Webster, G.D., & Lindsey, A.E. (2008). Solutions to the problem of diminished social interaction. *Evolutionary Psychology, 6*(4), 637-651. Available online: http://journals.sagepub.com/doi/10.1177/147470490800600410

Jones, W.H., Freemon, J.E., & Goswick, R.A. (1981). The persistence of loneliness: Self and other determinants. *Journal of Personality, 49*(1), 27-48.

Jopling, K. (2014). *Measuring the impact of services on loneliness: A scoping study*. London, UK: Campaign to End Loneliness. Available online: https://www.campaigntoendloneliness.org/wp-content/plugins/download-monitor/download.php?id=182

Jopling, K. (2015). *Promising approaches to reducing loneliness and isolation in later life*. London, UK: Campaign to End Loneliness. Available online:

https://www.campaigntoendloneliness.org/wp-content/uploads/Promising-approaches-to-reducing-loneliness-and-isolation-in-later-life.pdf

Justice in Aging (2015). *LGBT older adults in long-term care facilities.* Washington, DC: Author. Available online: http://www.justiceinaging.org.customers.tigertech.net/wp-content/uploads/2015/06/Stories-from-the-Field.pdf

Jylha, M. (2004). Old age and loneliness: Cross-sectional and longitudinal analyses in the Tampere longitudinal study on aging. *Canadian Journal on Aging*, *23*(2), 157-68.

Jylha, M., & Jokela J. (1990). Individual experiences as cultural: A cross-cultural study on loneliness among the elderly. *Ageing & Society, 10*(3),295-315.

Kadowaki, L., & Cohen, M. (2017). *Raising the profile of the community-based seniors' services sector in B.C.: A review of the literature*. Vancouver, BC: Seniors Raising the Profile Project. Available online: http://www.seniorsraisingtheprofile.ca/wp-content/uploads/2017/06/RPP-Literature-Review.pdf

Käll, A., Jägholm, S., Hesser, H., Andersson, F., Mathaldi, A., Norkvist, B.T., Shafran, R., & Andersson, G. (2019). Internet-based cognitive behavior therapy for loneliness: A pilot randomized controlled trial. *Behavior Therapy,* e-pub ahead of print. Available online: http://www.vancouverseniorsadvisory.ca/wp-content/uploads/Internet_Based_CBT_Loneliness_Kall_BT_2019.pdf

Kamber, T. (2018). Fighting social isolation: A view from the trenches. *Public Policy & Aging Report, 27*(4), 149-151.

Kantar Public (2016). *Trapped in a bubble: An investigation into triggers from loneliness in the UK*. London: Kantar Public. Available online: http://www.redcross.org.uk/~/media/BritishRedCross/Documents/What%20we%20do/UK%20services/Co_Op_Trapped_in_a_bubble_report_AW.pdf

Kassam, A. (2017, April 4). Is Vancouver lonelier than most cities or just better about addressing it? *The Guardian*. Available online: https://www.theguardian.com/world/2017/apr/04/vancouver-loneliness-engaged-city-taskforce-canada

Kaufman, S.M., Smith, A., O'Connell, J., & Marulli, D. (2016). *Intelligent transit*. New York, NY: Rudin Center for Transportation Policy & Management, New York University. Available online: https://wagner.nyu.edu/rudincenter/2016/09/new-report-intelligent-paratransit

Kauppi, M., Kawachi, I., Batty, G., Oksanen, T., Elovainio, M., Pentti, J., Aalto, V., Virtanen, M., Koskenvuo, M., Vahtera, J., & Kivimäki, M. (2017). Characteristics of social networks and mortality risk: Evidence from two prospective cohort studies. *American Journal of Epidemiology*. Advance online puiblication.

Kaye, L.W.E. (2018). Older adults, rural living, and the escalating risk of social isolation. *Public Policy & Aging Report, 27*(4), 139-144.

Kearns, A., Whitley, El., Tannahill, C., & Ellaway, A. (2015). 'Lonesome town'? Is loneliness associated with the residential environment, including housing and

neighbourhood factors? *Journal of Community Psychology, 43*(7), 849-867. Available online: https://dx.doi.org/10.1002%2Fjcop.21711

Keller, R.C. (2015). *Fatal isolation: The devastating Paris heat wave of 2003*. University of Chicago Press.

Kelly, J-F. (2012). *Social cities*. Carlton, Australia: The Grattan Institute. Available online: https://grattan.edu.au/report/social-cities/

Kemper, S. (1994). "Elderspeak": Speech accommodations to older adults. *Aging and Cognition, 1*(1), 17-28.

Kharicha, K., Iliffe, S., Manthorpe, J., Chew-Graham, C., Cattan, M., Goodman, C., Kirby-Barr, M., Whitehouse, J.H., & Walters, K. (2017). What do older people experiencing loneliness think about primary care or community based interventions to reduce loneliness? A qualitative study in England. *Health & Social Care in the Community, 25*(6), 1733-1742. Available online: https://doi.org/10.1111/hsc.12438

Khazan, O. (2017, April 6). How loneliness begets loneliness. *The Atlantic*. Available online: https://www.theatlantic.com/health/archive/2017/04/how-loneliness-begets-loneliness/521841/

Killeen, C. (1998). Loneliness: An epidemic in modern society. *Journal of Advanced Nursing, 28*(4), 762-770.

Kim, H.J., & Fredriksen-Goldsen, K.I. (2016). Living arrangement and loneliness among lesbian, gay, and bisexual older adults. *The Gerontologist, 56*(3), 548-558. Available online: http://age-pride.org/wordpress/wp-content/uploads/2015/08/Living-Arrangement-and-Loneliness-Among-Lesbian-Gay-and-Bisexual-Older-Adults.pdf

Kirkevold, M., Moyle, W., Wilkinson, C., Meyer, J., & Hauge, S. (2012). Facing the challenge of adapting to a life 'alone' in old age: The influence of losses. *Journal of Advanced Nursing, 69*(2), 394-403.

Kitzmuller, G., Clancy, A., Vaismoradi, M., Wegener, C., & Bondas, T. (2018). "Trapped in an empty waiting room"—The existential human core of loneliness in old age: A meta-synthesis. *Qualitative Health Research, 28*(2), 213-230. Available online: https://www.researchgate.net/publication/321782228_Trapped_in_an_Empty_Waiting_Room-The_Existential_Human_Core_of_Loneliness_in_Old_Age_A_Meta-Synthesis

Klineberg, E. (1995). *Heat wave: A social autopsy of disaster in Chicago*. University of Chicago Press.

Klineberg, E. (2012a, April). Facebook isn't making us lonely—and Americans aren't all that lonely, either: Refuting the new *Atlantic* cover story. *Slate*. Available online: http://www.slate.com/human-interest/2018/03/how-should-courts-compensate-parents-when-assisted-reproductive-technology-goes-wrong.html

Klinenberg, E. (2012b). *Going solo: The extraordinary rise and surprising appeal of living alone*. New York, NY: Penguin Press.

Klineberg, E. (2018, February 9). Is loneliness a health epidemic? *The New York Times Sunday Review*. Available online: https://www.nytimes.com/2018/02/09/opinion/sunday/loneliness-health.html

Klok, J., Tilburg, T.G., Suanet, B., Fokkema, T., & Huisman, M. (2017). National and transnational belonging among Turkish and Moroccan older migrants in the Netherlands: Protective against loneliness? *European Journal of Ageing*, *14*(4), 341-351. Available online: https://doi.org/10.1007/s10433-017-0420-9

Knowles, M.L., Lucas, G.M., Baumeister, R.F., & Gardner, W.L. (2015). Choking under social pressure: Social monitoring among the lonely. *Personality & Social Psychology Bulletin, 41*(6), 805-821. Available online: https://ai2-s2-pdfs.s3.amazonaws.com/cb53/c61aa2e63cccba41bed31bf78124d369480a.pdf

Kobayashi, L.C., & Steptoe, A. (2018). Social isolation, loneliness, and health behaviors at older ages: Longitudinal cohort study. *Annals of Behavioral Medicine, 52*(7), 582-593. Available online: https://www.researchgate.net/publication/322710750_Social_Isolation_Loneliness_and_Health_Behaviors_at_Older_Ages_Longitudinal_Cohort_Study

Konnikova, M. (2013, September 10). How Facebook makes us unhappy. *New Yorker*. Available online: https://www.newyorker.com/tech/elements/how-facebook-makes-us-unhappy

Kooden, H., & Flowers, C. (2000). *Golden men: The power of gay midlife*. New York: Harper-Collins (Avon).

Kroenke, C., Michael, Y., Shu, X., Poole, E., Kwan, M., Nechuta, S., Caan, B.J., Pierce, J.P., & Chen, W. (2017). Post-diagnosis social networks, and lifestyle and treatment factors in the after breast cancer pooling project. *Psycho-Oncology, 26*(4), 544-552. Available online: https://escholarship.org/uc/item/13b5v2pm

Kuiper, J., Zuidersma, M., Oude Voshaar, R., Zuidema, S., Van den Heuvel, E., Stolk, R., & Smidt, N. (2015). Social relationships and risk of dementia: A systematic review and meta-analysis of longitudinal cohort studies. *Ageing Research Reviews, 22*, 39-57. Available online: https://www.researchgate.net/publication/276067347_Social_relationships_and_risk_of_dementia_A_systematic_review_and_meta-analysis_of_longitudinal_cohort_studies

Kuyper, L, & Fokkema, T. (2010). Loneliness among older lesbian, gay, and bisexual adults: the role of minority stress. *Archives of Sexual Behavior*, *39*(5), 1171-80. Available online: http://grai.org.au/sites/default/files/library/lonliness%20in%20lesb.pdf

Kvaal, K., Halding, A.G., Kvigne, K. (2014). Social provision and loneliness among older people suffering from chronic physical illness. A mixed-methods approach. *Scandinavian Journal of Caring Sciences, 28*(1), 104-111.

Lacey, R.E., Kumari, M., & Bartley, M. (2014). Social isolation in childhood and adult inflammation: Evidence from the National Child Development Study.

Psychoneuroendocrinology, 50, 85-94. Available online: https://doi.org/10.1016/j.psyneuen.2014.08.007

Lachs, M.S., Berkman, L., Fulmer, T., & Horwitz, R. (1994). A prospective community-based pilot study of risk factors for the investigation of elder mistreatment. *Journal of the American Geriatrics Society, 42*(2),169-173.

Laing, O. (2016). *The lonely city: Adventures in the art of being alone*. New York: Picador.

Lambert, V. (2016, January 4). Not just a problem for old people: Why the young are lonely, too. *The Telegraph*. Available online: https://www.telegraph.co.uk/health-fitness/mind/not-just-a-problem-for-old-people-why-the-young-are-lonely-too/

Landeiro, F., Leal, J., & Gray, A.M. (2016). The impact of social isolation on delayed hospital discharges of older hip fracture patients and associated costs. *Osteoporosis International, 27*(2), 737-745.

LaPorte, A., Nauenberg, E., & Shen, L. (2008). Aging, social capital, and health care utilization in Canada. *Health Economics, Policy and Law, 3*(4), 393-411. Available online: http://individual.utoronto.ca/lshen/aging.pdf

Lasgaard, M., Friis, K., & Shevlin, M. (2016). "Where are all the lonely people?" A population-based study of high-risk groups across the lifespan. *Social Psychiatry and Psychiatric Epidemiology, 51*(10), 1373-1384. Available online: http://uir.ulster.ac.uk/35730/1/Where%20are%20all%20the%20lonely%20people%20-%20SPPE-D-16-00144-R2_ACCEPTED.pdf

Latson, J. (2018, March 7). A cure for disconnection. *Psychology Today*. Available online: https://www.psychologytoday.com/us/articles/201803/cure-disconnection

Lau, S., & Gruen, E. (1992). The social stigma of loneliness: Effect of target person's and perceiver's sex. *Personality and Social Psychology Bulletin, 18*(2), 182-189.

Leary, M. (2015). Emotional responses to interpersonal rejection. *Dialogues in Clinical Neuroscience, 17(4),* 435-441. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4734881/

Lecovich, E. (2016). Do caregiving burden and satisfaction predict loneliness in older care recipients? *Aging and Mental Health, 20*(4), 441-449.

Lee, Y., & Ko, Y. (2017). Feeling lonely when not socially isolated: Social isolation moderates the association between loneliness and daily social interaction. *Journal of Social and Personal Relationships.* Advance online publication.

Leistner, D.L., & Steiner, R.L. (2017). Uber for seniors? Exploring transportation options for the future. *Transportation Record Research, 2660,* 22-29.

Leland, J. (2008, October 6). In 'sweetie' and 'dear,' a hurt for the elderly. *The New York Times*. Available online: http://www.nytimes.com/2008/10/07/us/07aging.html

Lelkes, O. (2011, May 10). Social participation statistics. *Eurostat*. Available online: http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Social_participation_statistics&oldid=56756

Lennon, R., & Curran, J.M. (2012). Social networks and older users: An examination of attitudes and usage intentions. *Contemporary Marketing Review, 2*(2), 1-13.

LeRoy, A.S., Murdock, K.W., Jaremka, L.M., & Loya, A. (2017). Loneliness predicts self-reported cold symptoms after a viral challenge. *Health Psychology, 36*(5), 512-520. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5486976/

Leyden, K.M. (2003). Social capital and the built environment: The importance of walkable neighborhoods. *American Journal of Public Health, 93*(9), 1546-1551. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1448008/

Liberatore, S., & MacDonald, C. (2016, October 4). The perfect pet? Hasbro unveils robot puppy that responds to scratches and even recognises its owner's voice. *Daily Mail*. Available online: http://www.dailymail.co.uk/sciencetech/article-3821918/Hasbro-unveils-robot-puppy-seniors-company-Toy-responds-touch-voice-cues-won-t-chew-slippers.html

Liebke, L., Bungert, M., Thome, J., Hauschild, S., Gescher, D.M., Schmahl, C., Bohus, M., & Lis, S. (2017). Loneliness, social networks, and social functioning in borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment, 8*(4), 349-356. Available online: https://www.researchgate.net/publication/306024475_Loneliness_Social_Networks_and_Social_Functioning_in_Borderline_Personality_Disorder

Lim, M.H., Rodebaugh, T.L., Zyphur, M.J., & Gleeson, J.F.M. (2016). Loneliness over time: The crucial role of social anxiety. *Journal of Abnormal Psychology, 125*(5), 620-630.

Linden, A. (2013). Assessing regression to the mean effects in health care initiatives. *BMC Medical Research Methodology, 13*(1), 1-7. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3849564/

Lindsay, E.K., Young, S., Brown, K.W., Smyth, J.M., & Creswell, J.D. (2019). Mindfulness training reduces loneliness and increases social contact in a randomized controlled trial. *Proceedings of the National Academy of Sciences, 116*(9), 3488-3493. Available online: https://doi.org/10.1073/pnas.1813588116

Liu, B., & Floud, S. (2017). Unravelling the associations between social isolation, loneliness, and mortality. *The Lancet Public Health, 2*(6), 248-249. Available online: https://doi.org/10.1016/S2468-2667(17)30090-7

London, B., Downey, G., Bonica, C., & Paltin, I. (2007). Social causes and consequences of rejection sensitivity. *Journal of Research on Adolescence, 17*(3), 481-506.

Long, C. R., & Averill, J. R. (2003). Solitude: An exploration of benefits of being alone. *Journal for the Theory of Social Behaviour, 33*(1), 21-44.

Long, M.V., & Martin, P. (2000). Personality, relationship closeness, and loneliness of oldest old adults and their children. *Journal of Gerontology: Psychological Science, 55*(5), 311-319. Available online: https://doi.org/10.1093/geronb/55.5.P311

Luanaigh, C.O., & Lawlor, B.A. (2008). Loneliness and the health of older people. *International Journal of Geriatric Psychiatry, 23*(12), 1213-1221.

Lubben, J., Blozik, E., Gillmann, G., Iliffe, S., von Renteln Kruse, W., Beck, J.C., & 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), 503-513. Available online: https://doi.org/10.1093/geront/46.4.503
Scale available here: https://www.brandeis.edu/roybal/docs/LSNS_website_PDF.pdf

Lucy, L., & Burns, L. (2017). Devising a composite index to analyze and model loneliness and related health risks in the United Kingdom. *Gerontology and Geriatric Medicine, 3*, 1-10. Available online: http://pubmedcentralcanada.ca/pmcc/articles/PMC5470657/

Luhmann, M., Bohn, J., Holtmann, J., Koch, T., & Eid, M. (2016). I'm lonely, can't you tell? Convergent validity of self- and informant ratings of loneliness. *Journal of Research in Personality, 61*, 50-60. Available online: https://pdfs.semanticscholar.org/1e76/c484a247fe684551c00a2810958a81fa6999.pdf

Luhmann, M., & Hawkley, L.C. (2016). Age differences in loneliness from late adolescence to oldest old age. *Developmental Psychology*, *52*(6), 943-959. Available online: https://www.researchgate.net/profile/Maike_Luhmann/publication/296282660_Age_Differences_in_Loneliness_From_Late_Adolescence_to_Oldest_Old_Age/links/56d3fcb408ae4d8d64a82f3e/Age-Differences-in-Loneliness-From-Late-Adolescence-to-Oldest-Old-Age.pdf

Luo, Y., Hawkley, L.C., Waite, L.J., & Cacioppo, J.T. (2012). Loneliness, health, and mortality in old age: A national longitudinal study. *Social Science & Medicine, 74*(6), 907-914. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3303190/

Lupton, D., & Seymour, W. (2000). Technology, selfhood and physical disability. *Social Science & Medicine, 50*(12), 1851-1862. Available online: https://pdfs.semanticscholar.org/07db/3bd6714ebb692c3717234665063 20f37f849.pdf

Lykes, V.A., & Kemmelmeier, M. (2014). What predicts loneliness? Cultural difference between individualistic and collectivistic societies in Europe. *Journal of Cross-Cultural Psychology, 45*(3), 468-490.

MacCourt, P. (2007). *Review of FTP services and policies and analysis of impact on social isolation*. Ottawa: Health Canada.

Maddux, S., & Applebaum (2010). *Gen Silent: The LGBT Aging Film*. Novato, California: Interrobang Productions. Trailer available online: http://gensilent.com/

Maguire Gillies, C. (2016, April 7). What's the world's loneliest city? *The Guardian*. Available online: https://www.theguardian.com/cities/2016/apr/07/loneliest-city-in-world

Mann, F., Bone, J., Lloyd-Evans, B., Frerichs, J., Pinfold, V., Ma, R., Wang, J., & Johnson, S. (2017). A life less lonely: The state of the art in interventions to reduce loneliness in people with mental health problems. *Social Psychiatry and Psychiatric Epidemiology, 52*(6), 627-638. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5487590/

Marche, S. (2012, May). Is Facebook making us lonely? *The Atlantic.* Available online: https://www.theatlantic.com/magazine/archive/2012/05/is-facebook-making-us-lonely/308930/

Marsh Ryerson, L. (2018). Innovations in social connectedness. *Public Policy & Aging Report, 27*(4), 124-126.

Martens, W.H.J. (2010). Schizoid personality disorder linked to unbearable and inescapable loneliness. *European Journal of Psychiatry, 24*(1), 38-45. Available online: http://scielo.isciii.es/pdf/ejpen/v24n1/original4.pdf

Martina, C.M., & Stevens, N.L. (2006). Breaking the cycle of loneliness? Psychological effects of a friendship enrichment program for older women. *Aging & Mental Health, 10*(5), 467-475. Available online: https://research.vu.nl/ws/portalfiles/portal/2255532

Masi, C.M., Chen, H.Y., Hawkley, L.C., & Cacioppo, J.T. (2010). A meta-analysis of interventions to reduce loneliness. *Personality and Social Psychology Review*, 15(3), 219-266. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3865701/

Masterson, A. (2017, June 24). Loneliness: What it is, how it makes you sick, and how to cure it. *The Age* (Australia). Available online: https://www.theage.com.au/national/victoria/loneliness-what-it-is-how-it-makes-you-sick-and-how-to-cure-it-20170621-gwvikj.html

Matthews, T., Danese, A., Gregory, A.M., Caspi, A., Moffitt, T.E., & Arseneault, L. (2017). Sleeping with one eye open: Loneliness and sleep quality in young adults. *Psychological Medicine*, *47*(12), 2177-2186. Available online: https://www.ncbi.nlm.nih.gov/pubmed/28511734

Matthews, T., Danese, A., Wertz, J., Odgers, C.L., Ambler, A., Moffitt, T.E., & Arsenault, L. (2016). Social isolation, loneliness and depression in young adulthood: A behavioural genetic analysis. *Social Psychiatry and Psychiatric Epidemiology. 51*(3), 339-48. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4819590/

Matthews, T., Odgers, C.L., Danese, A., Fisher, H.L., Newbury, J.B., Caspi, A., Moffit, T.E., & Arsenault, L. (2019). Loneliness and neighbourhood characteristics: A multi-informant, nationally representative study of young adults. *Psychological Science, 30*(5), 765-775. Available online:

https://moffittcaspi.trinity.duke.edu/sites/moffittcaspi.trinity.duke.edu/files/Matthews_2019_LonelinessNeighbourhood.pdf

Mazurek, M.O. (2014). Loneliness, friendship, and well-being in adults with autism spectrum disorders. *Autism, 18*(3), 223-232.

McDaid, D., Bauer, A., & Park, A-L. (2017). Making the economic case for investing in actions to prevent and/or tackle loneliness: A systematic review. London School of Economics. Available online: http://cdn.basw.co.uk/upload/basw_51039-5.pdf

McGregor, J. (2017, October 4). The former surgeon general says there's a 'loneliness epidemic' and work is partly to blame. *The Washington Post*. Available online: https://www.washingtonpost.com/news/on-leadership/wp/2017/10/04/this-former-surgeon-general-says-theres-a-loneliness-epidemic-and-work-is-partly-to-blame/?utm_term=.71b7fbeac2d8

McHugh, J.E., Kenny, R.A., Lawlor, B.A., Steptoe, A., & Kee, F. (2017). The discrepancy between social isolation and loneliness as a clinically meaningful metric: Finding from the Irish and English Longitudinal Studies of Ageing, *International Journal of Geriatric Psychiatry, 32*(6), 664-674.

McHugh Power, J.E., Hannigan, C., Carney, S., & Lawlor, B.A. (2017). Exploring the meaning of loneliness among socially isolated older adults in rural Ireland: A qualitative investigation. *Qualitative Research in Psychology, 14*(4), 394-414.

McInnis, G.J., White, J.H. (2001). A phenomenological exploration of loneliness in the older adult. *Archives of Psychiatric Nursing, 15*(3), 128-139.

McMartin, P. (2015, April 15). Out of the man cave and into the shed. *Vancouver Sun*. Available online: http://www.vancouversun.com/life/Pete+McMartin+cave+into+shed/10975087/story.html

McPherson, M., Smith-Lovin, L., & Brashears, M.E. (2006). Social isolation in America: Changes in core discussion networks over two decades. *American Sociological Review, 71*(3), 353-375. Available online: https://www.researchgate.net/publication/237264578_Social_Isolation_in_America_Changes_in_Core_Discussion_Networks_Over_Two_Decades

Mehta, V. (2007). Lively streets: Determining environmental characteristics to support social behavior. *Journal of Planning Education and Research, 27*(2), 165-187.

Mehta, V. (2009). Look closely and you will see, listen carefully and you will see: Urban design and social interaction on streets. *Journal of Urban Design, 14*(1), 29-64.

Mental Health Foundation UK (2010). *The lonely society?* London, UK: Author. Available online: https://www.mentalhealth.org.uk/sites/default/files/the_lonely_society_report.pdf

MetLife Mature Market Institute (2010). *Still out, still aging: MetLife Study of Lesbian, Gay, Bisexual and Transgender Baby Boomers*. New York, NY: MetLife. Available online: https://www.metlife.com/assets/cao/mmi/publications/studies/2010/mmi-still-out-still-aging.pdf

Mijuskovic, B.L. (2012). *Loneliness in philosophy, psychology, and literature*. Bloomington, IN: iUniverse.

Mijuskovic, B.L. (2015). *Feeling lonesome: The philosophy and psychology of loneliness*. Santa Barbara, CA: Praeger.

Mikulincer, M., & Shaver, P.R. (2014). An attachment perspective on loneliness. In R.J. Coplan & J.C. Bowker (Eds.), *Handbook of Solitude: Psychological Perspectives on Social Isolation, Social Withdrawal, and Being Alone* (pp. 34-50). Wiley-Blackwell.

Miles, M.S., Isler, M.R., Banks, B.B., Sengupta, S.,& Corbie-Smith, G. (2011). Silent endurance and profound loneliness: Socioemotional suffering in African Americans living with HIV in the rural south. *Qualitative Health Research, 21*(4), 489-501. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3073239/

Miller, A., Simpson, B., Buckle, L., & Berger, S. (2015). *Social inclusion of vulnerable seniors: A review of the literature of best and promising practices in working with seniors.* Calgary, AB: Constellation Consulting Group. Available online: https://static1.squarespace.com/static/57e8067dd2b857a31e18826c/t/5803c4c8d1758e435b38bcad/1476642003202/Seniors+Best+Practice+Research+Document+Final+10_09_2015.pdf

Miller, L.M., Dieckmann, N.F., Mattek, N.C., Lyons, K.S., & Kaye, J.A. (2014). Social activity decreases risk of placement in a long-term care facility for a prospective sample of community-dwelling older adults. *Research in Gerontological Nursing, 7*(3), 106-112. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4040300/

Miller, R.S. (1997). We always hurt the ones we love. In R.M. Kowalski (Ed.), *The Plenum series in social/clinical psychology: Aversive interpersonal behaviors* (pp. 11-29). New York, NY: Plenum Press.

Mistry, R., Rosansky, J., McGuire, J., McDermott, C., Jarvik, L., & Grp, U. C. (2001). Social isolation predicts re-hospitalization in a group of older American veterans enrolled in the UPBEAT Program. *International Journal of Geriatric Psychiatry*, 16(10), 950-959.

Molloy, G.J., McGee, H.M., O'Neill, D., & Conroy, R.M. (2010). Loneliness and emergency and planned hospitalizations in a community sample of older adults. *Journal of the American Geriatrics Society, 58*(8), 1538-1541.

Montgomery, C. (2013). *Happy city: Transforming our lives through urban design*. Toronto: Anchor Canada.

Moorman, S.M. (2016). Dyadic perspectives on marital quality and loneliness in later life. J*ournal of Social and Personal Relationships, 33*(5), 600-618.

Morris, M.E., Adair, B., Ozanne E., Kurowski, W., Miller, K.J., Pearce, A.J., Santamaria, N., Long, M., Ventura, C., & Said, C.M. (2014). Smart technologies to enhance social connectedness in older people who live at home. *Australasian Journal on Ageing, 33*(3), 142-152.

Moustakas, C.E. (1961). *Loneliness*. New York, NY: Prentice-Hall.

Mund, M., & Neyer, F.J. (2016). The winding paths of the lonesome cowboy: Evidence for mutual influences between personality, subjective health, and loneliness. *Journal of Personality, 84*(5), 646-57. Available online: https://www.researchgate.net/publication/279307144_The_Winding_Paths_of_the_Lonesome_Cowboy_Evidence_for_Mutual_Influences_Between_Personality_Subjective_Health_and_Loneliness

Murthy, V. (2017, September). Work and the loneliness epidemic. *Harvard Business Review.* Available online: https://hbr.org/cover-story/2017/09/work-and-the-loneliness-epidemic

National Seniors Council of Canada (2014). *Report on the social isolation of seniors*. Ottawa: Government of Canada. Available online: https://www.canada.ca/content/dam/nsc-cna/documents/pdf/policy-and-program-development/publications-reports/2014/Report_on_the_Social_Isolation_of_Seniors.pdf

National Seniors Council of Canada (2017). *Who's at risk and what can be done about it? A review of the literature on the social isolation of different groups of seniors*. Ottawa: Government of Canada. Available online: https://www.canada.ca/en/national-seniors-council/programs/publications-reports/2017/review-social-isolation-seniors.html

Nardi, P.M. (Ed.) (1992). *Men's friendships*. Thousand Oaks, California: Sage.

Nelson, C.A., Fox, N.A., & Zeanah, C.H. (2014). *Romania's abandoned children: Deprivation, brain development, and the struggle for recovery*. Cambridge, MA: Harvard University Press.

Neves, B.B., Franz, R.L., Munteanu, C., Baecker, R., & Ngo, M. (2015). "My hand doesn't listen to me!": Adoption and evaluation of a communication technology for the 'oldest old.' Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, Soeul, Korea. Available online: http://bbneves.com/wp-content/uploads/2010/02/CHI2015_InTouchFINAL.pdf

New Zealand Ministry of Social Development (2016). *The social report 2016*. Available online: http://socialreport.msd.govt.nz/social-connectedness/loneliness.html

Newall, N.E.G., Chipperfield, J.G., & Bailis D.S. (2014). Predicting stability and change in loneliness in later life. *Journal of Social and Personal Relationships*, *31*(3), 335-351. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5112010/

Newall, N.E.G, Chipperfield, J.G., Bailis, D.S., & Stewart, T.L. (2013). Consequences of loneliness on physical activity and mortality in older adults and the power of positive emotions. *Health Psychology, 32*(8), 921-924.

Newall, N.E.G., Chipperfield, J.G., Clifton, R., Perry, R., Swift, A., & Ruthig, J. (2009). Causal beliefs, social participation, and loneliness among older adults: A longitudinal study. *Journal of Social and Personal Relationships*, *26*(2-3), 273-290.

Newall, N.E.G., McArthur, J., & Menec, V.H. (2015). A longitudinal examination of social participation, loneliness, and use of physician and hospital services. *Journal of*

Aging and Health, 27(3), 500-518. Available online: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.923.5003&rep=rep1&type=pdf

Newall, N.E.G, & Menec, V.H. (2015). Targeting socially isolated older adults: A process evaluation of the senior centre without walls social and educational program. *Journal of Applied Gerontology, 34*(8), 958-76.

Newall, N.E.G, & Menec, V.H. (2017). Loneliness and social isolation of older adults: Why it is important to examine these social aspects together. *Journal of Social and Personal Relationships*. Advance online publication.

Newton, M. (2002). *Savage girls and wild boys: A history of feral children*. New York: Picador.

Ng, C.F., & Northcott, H.C. (2015). Living arrangements and loneliness of South Asian immigrant seniors in Edmonton, Canada. *Ageing & Society, 35*(2), 552-575.

Nicholson, N. (2012). A review of social isolation: An important but underassessed condition in older adults. *The Journal of Primary Prevention, 33*(2-3), 137-152.

Nicolaisen, M., & Thorsen, K. (2014). Loneliness among men and women: A five-year follow-up study. *Aging & Mental Health, 18*(2), 194-206.

Nordstrom, T. (2017, November 7). Workplace loneliness is more common than you think. Here's why you shouldn't ignore it. *INC Magazine*. Available online: https://www.inc.com/todd-nordstrom/feeling-lonely-at-work-it-could-be-destroying-your-potential-heres-what-to-do-about-it.html

Nowland, R., Necka, E., & Cacioppo, J.T. (2018). Loneliness and social Internet use: Pathways to reconnection in a digital world? *Perspectives on Psychological Science, 13*(1), 1-18. Available online: https://www.researchgate.net/publication/319993668_Loneliness_and_Social_Internet_Use_Pathways_to_Reconnection_in_a_Digital_World

Nyqvist, F., Cattan, M., Andersson, L., Forsman, A.K., & Gustafson, Y. (2013). Social capital and loneliness among the very old living at home and in institutional settings: A comparative study. *Journal of Aging and Health, 25*(6), 1013-1035.

Nyqvist, F., Victor, C.R., Forsman, A.K., & 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*, 542-542. Available online: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-016-3248-x

Olds, J., & Schwartz, R.S. (2009). *The lonely American: Drifting apart in the twenty-first century*. Boston: Beacon Press.

Olds, J., Schwartz, R.S., & Webster, H. (1996). *Overcoming loneliness in everyday life*. Secaucus, NJ: Carol Publishing Group.

Ong, A.D., Rothstein, J.D., & Uchino, B.N. (2012). Loneliness accentuates age differences in cardiovascular responses to social evaluative threat. *Psychology and Aging, 27*(1), 190-198.

Ong, A.D., Uchino, B.N., & Wethington, E. (2016). Loneliness and health in older adults: A mini-review and synthesis. *Gerontology, 62*, 443-449. Available online: https://www.karger.com/?DOI=10.1159/000441651

Onishi, N. (2017, November 30). A generation in Japan faces a lonely death. *The New York Times*. Available online: https://www.nytimes.com/2017/11/30/world/asia/japan-lonely-deaths-the-end.html

Osborne, J.W. (2012). Psychological effects of the transition to retirement. *Canadian Journal of Counselling and Psychotherapy, 46*(1), 45-58. Available online: https://files.eric.ed.gov/fulltext/EJ969555.pdf

Otani, J. (2010). *Older people in natural disasters: The Great Hanshin Earthquake of 1995*. Melbourne, Australia: Trans Pacific Press.

Paik, A., & Sanchagrin, K. (2013). Social isolation in America: An artifact. *American Sociological Review, 78*(3), 339-360. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2101146

Paikin, S. (Host) (2018, April 3). Supporting the isolated elderly. In *The Agenda with Steve Paikin* [Television broadcast]. Toronto: TVOntario. Available online: https://tvo.org/video/programs/the-agenda-with-steve-paikin/supporting-the-isolated-elderly

Parmelee, P., & Werner, C. (1978). Lonely losers: Stereotypes of single dwellers. *Personality and Social Psychology Bulletin, 4*(2), 292-295.

Pauly, T., Lay, J.C., Nater, U.M., Scott, S.B., & Hoppmann, C.A. (2017) How we experience being alone: Age differences in affective and biological correlates of momentary solitude. *Gerontology, 63*(1), 55-66. Available online: https://doi.org/10.1159/000450608

Pekovic, V., Seff, L., & Rothman, M.D. (2007). Planning for and responding to special needs of elders in natural disasters. *Generations, 31*(4), 37-41.

Peplau, L.A. & Perlman, D. (1982). *Loneliness: A sourcebook of current theory, research and therapy* (pp.1-18). New York: Wiley.

Perissinotto, C.M., & Covinsky, K.E. (2014). Living alone, socially isolated or lonely—What are we measuring? *Journal of General Internal Medicine, 29*(11), 1429-1431. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4238196/

Perissinotto, C.M., Stijacic Cenzer, I., & Covinsky, K.E. (2012). Loneliness in older persons: A predictor of functional decline and death. *Archives of Internal Medicine*, *172*(14), 1078-83. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4383762/

Perlman, D., & Landolt, M.A. (1999). Examination of loneliness in children-adolescents and in adults: Two solitudes or unified enterprise? In K.J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 325-352). New York, NY: Cambridge University Press.

Perlman D., & Peplau L.A . (1981). Toward a social psychology of loneliness. In S.W. Duck & R. Gilmour (Eds.), *Personal relationships in disorder* (pp. 31-56). London, UK: Academic Press.

Pertusa, A., Fullana, M., Sing, S., Alonso, P., Menchon, J.M., & Mataix-Cols, D. (2008). Compulsive hoarding: OCD symptom, distinct clinical syndrome, or both? *The American Journal of Psychiatry, 165*(10), 1289-1298. Available online: https://www.researchgate.net/publication/5368811_Compulsive_Hoarding_OCD_Symptom_Distinct_Clinical_Syndrome_or_Both

Peterborough Council on Aging (2017). *Age-Friendly Peterborough: 2017 Community Action Plan*. Available online: http://www.peterboroughcouncilonaging.com/wp-content/uploads/2017/05/AFP-CAP-V1-web.pdf

Phillips, L.R. (1983). Abuse and neglect of the frail elderly at home: An exploration of theoretical relationships. *Journal of Advanced Nursing, 8*(5), 379-392.

Pieters, R. (2013). Bidirectional dynamics of materialism and loneliness: Not just a vicious cycle. *Journal of Consumer Research, 40*(4), 615-631.

Pietrzak, R.H., Pitts, B.L., Harpaz-Rotem, I., Southwick, S.M., & Whealin, J.M. (2017). Factors protecting against the development of suicidal ideation in military veterans. *World Psychiatry, 16*(3), 326-327. Available online: https://doi.org/10.1002/wps.20467

Pikhartova, J., Bowling, A., & Victor, C. (2014). Does owning a pet protect older people against loneliness? *BMC Geriatrics, 14*, 106. Available online: https://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-106

Pikhartova, J., Bowling, A., & Victor, C. (2016). Is loneliness in later life a self-fulfilling prophecy? *Aging & Mental Health*, *20*(5), 543-549. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4806344/

Pinquart, M., & Sörensen, S. (2001). Influence on loneliness in older adults: A meta-analysis. *Basic and Applied Social Psychology, 23*(4), 245-266. Available online: https://www.researchgate.net/publication/247808469_Influences_on_Loneliness_in_Older_Adults_A_Meta-Analysis

Pope, M., Wierzalis, E., Barret, B., & Rankins, M. (2007). Sexual and intimacy issues for aging gay men. *Adultspan, 6*(2), 68-82.

Portacolone, E. (2018). Structural factors of elders' isolation in a high-crime neighbourhood: An in-depth perspective. *Public Policy & Aging Report, 27*(4), 152-155.

PostNL (nd). Registering healthcare needs: "People were often very pleased with our visits." Available online: https://www.postnl.nl/en/about-postnl/about-us/our-organisation/mail-in-the-netherlands/case-registering-healthcare-needs/

Prieto-Flores, M.E., Forjaz, M.J., Fernandez-Mayoralas, G., Rojo-Perez, F., & Martinez-Martin, P. (2011). Factors associated with loneliness of non-institutionalized and institutionalized older adults. *Journal of Aging and Health, 23*(1), 177-194. Available online:

https://www.researchgate.net/publication/46820396_Factors_Associated_With_Loneliness_of_Noninstitutionalized_and_Institutionalized_Older_Adults

Pronk, M., Deeg, D.J., Kramer, S.E. (2013). Hearing status in older persons: A significant determinant of depression and loneliness? Results from the Longitudinal Aging Study Amsterdam. *American Journal of Audiology, 22*(2), 316-320.

Putnam, R.D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Pynnönen, K., Törmakängas, T., Heikkinen, R., Rantanen, T., & Lyyra, T. (2012). Does social activity decrease risk for institutionalization and mortality in older people? *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 67B(6)*, 765-774.

Qualter, P., Vanhalst, J., Harris, R., Van Roekel, E., Lodder, G., Bangee, M., Maes, M., & Verhagen, M. (2015). Loneliness across the life span. *Perspectives on Psychological Science, 10*(2), 250-264. Available online: http://clok.uclan.ac.uk/11675/1/PoPS_Ontogeny_of_Loneliness_2015.pdf

Ramage-Morin, P.L., & Gilmour, H. (2013). Urinary incontinence and loneliness in Canadian seniors. *Health Reports, 24*(10), 3-10. Available online: https://www.ncbi.nlm.nih.gov/pubmed/24259124

Reed, C. (2015, April 15). Dutch nursing home offers rent-free housing to students. *PBS Newshour*. Available online: https://www.pbs.org/newshour/world/dutch-retirement-home-offers-rent-free-housing-students-one-condition

Renzetti, E. (2017, March 25). Life of solitude: A loneliness crisis is looming. *The Globe & Mail*. Available online: https://www.theglobeandmail.com/life/life-of-solitude-a-loneliness-crisis-is-looming/article15573187/

Retrum, J. (2018, March 27). Impacting social isolation in at-risk older adults: A review of interventions. Poster presented at the 64th Annual Meeting of the American Society on Aging, San Francisco, CA.

Richard, A., Rohrmann, S., Vandeleur, C.L., Schmid, M., Barth, J., & Eichholzer, M. (2017). Loneliness is adversely associated with physical and mental health and lifestyle factors: Results from a Swiss national survey. *PLOS One, 2*(7): e0181442. Available online: https://doi.org/10.1371/journal.pone.0181442

Rico-Uribe, L.A., Caballero, F.F., Martín-María, N., Cabello, M., Ayuso-Mateos, J.L., & Miret, M. (2018) Association of loneliness with all-cause mortality: A meta-analysis. *PLoS ONE 13*(1): e0190033. Available online: https://doi.org/10.1371/journal.pone.0190033

Rieland, R. (2017, January 5). Lyft and Uber want to give old folks a ride. *Smithsonian Magazine*. Available online: https://www.smithsonianmag.com/innovation/lyft-uber-want-to-give-old-folks-ride-180961688/

Robinson, H., MacDonald, B., Kerse, N., & Broadbent, E. (2013). The psychosocial effects of a companion robot: A randomized controlled trial. *Journal of the American*

Medical Directors Association, 14(9), 661-667. Available online: https://www.ifa-fiv.org/wp-content/uploads/2015/11/2013-Paro-loneliness-RCT.pdf

Robison, J., Fortinsky, R., Kleppinger, A., Shugrue, N., & Porter, M. (2009). A broader view of family caregiving: Effects of caregiving and caregiver conditions on depressive symptoms, health, work, and social isolation. *Journals of Gerontology Series B, 64*(6), 788-798.

Rokach, A. (2001). Strategies of coping with loneliness throughout the lifespan. *Current Psychology, 20*(1), 3-18.

Rokach, A., Orzeck, T., & Neto, F. (2004). Coping with loneliness in old age: A cross-cultural comparison. *Current Psychology, 23*(2), 127-137. Available online: https://www.researchgate.net/publication/226461808_Coping_with_loneliness_in_old_age_A_cross-cultural_comparison

Rook, K.S. (1984a). Promoting social bonding: Strategies for helping the lonely and socially isolated. *American Psychologist, 39*(12), 1389-1407.

Rook, K.S. (1984b). The negative side of social interaction: Impact on psychological well-being. *Journal of Personality and Social Psychology, 46*(5), 1097-1108. Available online: https://pdfs.semanticscholar.org/b0c6/42a01561c1b1ccae33c9b69d5c2936d08721.pdf

Roos, V., Klopper, H. (2010). Older persons' experiences of loneliness: A South African perspective. *Journal of Psychology in Africa, 20*(2), 281-289.

Roos, V., & Malan, L. (2012). The role of context and the interpersonal experience of loneliness among older people in a residential care facility. *Global Health Action, 5*: 18861. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3470719/

Rotenberg, K. (1994). Loneliness and interpersonal trust. *Journal of Social and Clinical Psychology, 13*(2), 152-173. Available online: https://www.researchgate.net/publication/277429656_Loneliness_and_Interpersonal_Trust

Rothstein, M.A. (2014). What is an epidemic? *Journal of Law, Medicine & Ethics, 42*(3), 389-391. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2481747

Routasalo, P.E., Savikko, N., Tilvis, R.S., Strandberg, T.E., & Pitkälä, K.H. (2006). Social contacts and their relationship to loneliness among aged people: A population-based study. *Gerontology*, *52*(3), 181-187.

Russell, D.W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment, 66,* 20-40. Available online: https://www.researchgate.net/profile/Daniel_Russell4/publication/14623374_UCLA_Loneliness_Scale_Version_3_Reliability_Validity_and_Factor_Structure/links/0deec52ab90c7c622b000000/UCLA-Loneliness-Scale-Version-3-Reliability-Validity-and-Factor-Structure.pdf

Russell, D.W., Cutrona, C.E., de la Mora, A., & Wallace, R.B. (1997). Loneliness and nursing home admission among rural older adults. *Psychology & Aging, 12*(4), 574-589.

Russell, D.W., Cutrona, C.E., McCrae, C., & Gomez, M. (2012). Is loneliness the same as being alone? *Journal of Psychology, 146*(1-2), 7-22. Available online: https://www.researchgate.net/publication/221804276_Is_Loneliness_the_Same_as_Being_Alone

SAGE USA (Services & Advocacy for Gay, Lesbian, Bisexual & Transgender Elders) (2014). *Out & visible: The experiences and attitudes of lesbian, gay, bisexual and transgender older adults, ages 45-75*. New York, NY: Author. Available online: https://www.sageusa.org/files/LGBT_OAMarketResearch_Rpt.pdf

Sandstrom, G., & Dunn, E.W. (2014). Social interactions and well-being: The surprising power of weak ties. *Personality & Social Psychology Bulletin, 40*(7), 910-922.

Sarner, M. (2018, January 18). Feeling lonely? Meet the people who suffered extreme isolation—then found happiness. *The Guardian*. Available online: https://www.theguardian.com/lifeandstyle/2018/jan/18/feeling-lonely-meet-people-extreme-isolation-found-happiness

Sarkisian, N., & Gerstel, N. (2016). Does singlehood isolate or integrate? Examining the link between marital status and ties to kin, friends, and neighbours. *Journal of Social and Personal Relationships, 33*(3), 361-384.

Savage, D. (2018, September 11). Gay and lonely. *Savage Love*. Available online: https://www.thestranger.com/savage-love/2018/09/11/32176346/savage-love

Savikko, N., Routasalo, P., Tilvis, R., Strandberg, T., & Pitkälä, K. (2005). Predictors and subjective causes of loneliness in an aged population. *Archives of Gerontology and Geriatrics, 41*(3), 223-233.

Schaie, K.W. (1988). Ageism in psychological research. *American Psychologist, 43*(3), 179-183.

Scharf, T. (2011). Loneliness: An urban perspective. In *Safeguarding the convoy: A call to action from the Campaign to End Loneliness* (pp. 31-34). London, UK: Campaign to End Loneliness. Available online: https://www.researchgate.net/publication/227944432_Alleviating_loneliness_among_older_adults_Possibilities_and_constraints_of_interventions

Scharf, T., & de Jong Gierveld, J. (2008). Loneliness in urban neighbourhoods: An Anglo-Dutch comparison. *European Journal on Aging, 5*, 103-115. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5546272/

Scharf, T., Phillipson, C., Smith, A. E., & Kingston, C. (2002). Growing older in socially deprived areas: Social exclusion in later life. Staffordshire, UK: Keele University. Available online: https://www.ageuk.org.uk/documents/en-gb/for-professionals/communities-and-inclusion/id2255_a_growing_older_in_socially_deprived_areas_social_exclusion_in_later_life_2002_pro.pdf

Schinka, K. C., van Dulmen, M.H.M., Bossarte, R., & Swahn, M. (2012). Association between loneliness and suicidality during middle childhood and adolescence: Longitudinal effects and the role of demographic characteristics. *The Journal of Psychology, 146*(1-2), 105-118. Available online: https://www.researchgate.net/publication/221804282_Association_Between_Loneliness_and_Suicidality_During_Middle_Childhood_and_Adolescence_Longitudinal_Effects_and_the_Role_of_Demographic_Characteristics

Schoenmakers, E. (2013). *Coping with loneliness*. Doctoral dissertation, VU University Amsterdam. Available online: https://research.vu.nl/en/publications/coping-with-loneliness

Segrin, C., & Passalacqua, S.A. (2010). Functions of loneliness, social support, health behaviors, and stress in association with poor health. *Health Communication, 25*(4), 312-322.

Senior, J. (2008, November 23). Alone together: Is urban loneliness a myth? *New York Magazine*. Available online http://nymag.com/news/features/52450/

Seppala, E., & King, M. (2017, June 29). Burnout at work isn't just about exhaustion. It's also about loneliness. *Harvard Business Review*. Available online: https://hbr.org/2017/06/burnout-at-work-isnt-just-about-exhaustion-its-also-about-loneliness

Shakya, H.B., & Christakis, N.A. (2017). Association of Facebook use with compromised well-being: A longitudinal study. *American Journal of Epidemiology, 185*(3), 203-211. Available online: https://pdfs.semanticscholar.org/78aa/46a7d47e58d94c36e46e82dac7c7bfaae8f9.pdf

Shaw, J., Farid, M., Noel-Miller, C., Joseph, N., Houser, A., Asch, S., Bhattacharya, J., & Flowers, L. (2017). Social isolation and Medicare spending: Among older adults, objective isolation increases expenditures while loneliness does not. *Journal of Aging and Health, 29*(7), 1119-1143.

Shiovitz-Ezra, S., & Ayalon, L. (2012). Use of direct versus indirect approaches to measure loneliness in later life. *Research on Aging, 34*(5), 572-591.

Shor, E., & Roelfs, D.J. (2015). Social contact frequency and all-cause mortality: A meta-analysis and meta-regression. *Social Science & Medicine, 128*, 76-86. Available online: https://pdfs.semanticscholar.org/091b/86cf564ff7d29e08b9b07f6c42930b3f5691.pdf

Shulevitz, J. (2013). The lethality of loneliness: We now know how it can ravage our body and brain. *The New Republic*. Available online: https://newrepublic.com/article/113176/science-loneliness-how-isolation-can-kill-you

Simon, E.B., & Walker, M.P. (2018). Sleep loss causes social withdrawal and loneliness. *Nature Communications, 9*(3146). Available online: https://www.nature.com/articles/s41467-018-05377-0

Simpson, J. (2002). Elderspeak: Is it helpful or just babytalk? University of Kansas Merrill Advanced Studies Centre. Available online: http://dept.ku.edu/~merrill/PDFfiles/Elderspeak.pdf

Slama, C., & Bergman-Evans, B. (2000). A troubling triangle: An exploration of loneliness, helplessness, and boredom of residents of a veterans home. *Journal of Psychosocial Nursing and Mental Health Services, 38*(12), 36-43.

Slettebö, Å. (2008). Safe, but lonely: Living in a nursing home. *Vård I Norden, 28*(1), 22-25. Available online: https://oda.hioa.no/en/safe-but-lonely-living-in-a-nursing-home

Smith, J.M. (2012). Toward a better understanding of loneliness in community-dwelling older adults. *Journal of Psychology, 146*(3), 293-311.

Smith, K.J., & Victor, C. (2018). Typologies of loneliness, living alone and social isolation, and their associations with physical and mental health. *Aging & Society,* advance online access. Available: https://doi.org/10.1017/S0144686X18000132

SPARC BC: Social Policy & Research Council of British Columbia (2017). *Exploring social isolation and loneliness among seniors in Vancouver*. Burnaby, BC: Author. Available online: http://www.seniorsloneliness.ca/sparc_bc_2017.pdf

Stanley, M., Moyle, W., Ballantyne, A., Jaworski, K., Corlis, M., Oxlade, D., Stoll, A., & Young, B. (2010). “Nowadays you don’t even see your neighbours”: Loneliness in the everyday lives of older Australians. *Health and Social Care in the Community, 18*(4), 407-414.

Statistics Canada (2015). Social participation and the health and well-being of Canadian seniors. Available online: https://www.statcan.gc.ca/pub/82-003-x/2012004/article/11720-eng.htm

Statistics Canada (2017). Families, households and marital status: Key results from the 2016 Census. Available online: https://www.statcan.gc.ca/daily-quotidien/170802/dq170802a-eng.htm

Statistics Netherlands (2016). *Trends in the Netherlands*. The Hague, NL. Available online: https://www.cbs.nl/en-gb/publication/2016/26/trends-in-the-netherlands-2016

Statistics New Zealand (2013). *Loneliness in New Zealand: Findings from the 20120 NZ General Social Survey*. Available online: http://archive.stats.govt.nz/browse_for_stats/people_and_communities/older_people/loneliness-in-nz-2010-NZGSS.aspx

Steed, L., Boldy, D., Grenade, L., & Iredell, H. (2007). The demographics of loneliness among older people in Perth, Western Australia. *Australasian Journal on Ageing, 26*(2), 81-86.

Stein, J.Y., Tuval-Mashiach, R. (2015). Loneliness and isolation in life-stories of Israeli veterans of combat and captivity. *Psychological Trauma: Theory, Research, Practice, and Policy, 7*(2), 122-130. https://www.researchgate.net/publication/262639083_Loneliness_and_Isolation_in_Life-Stories_of_Israeli_Veterans_of_Combat_and_Captivity

Steptoe, A., Shankar, A., Demakakos, P., & 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), 5797-5801. Available online: http://www.pnas.org/content/110/15/5797.full

Stevens, N. (2001). Combating loneliness: A friendship enrichment programme for older women. *Ageing & Society, 21*(2), 183-202. Available online: https://lemosandcrane.co.uk/resources/Ageing%20and%20Society%20-%20Combating%20loneliness%20-%20a%20friendship%20enrichment%20programme%20for%20older%20women.pdf

Stevens, N., Martina, C.M., & Westerhof, G.J. (2006). Meeting the need to belong: Predicting effects of a friendship enrichment program for older women. *The Gerontologist, 46*(4), 495-502. Available online: https://research.vu.nl/en/publications/meeting-the-need-to-belong-predicting-effects-of-a-friendship-enr

Stickley, A., & Koyanagi, A. (2016). Loneliness, common mental disorders and suicidal behavior: Findings from a general population survey. *Journal of Affective Disorders, 197*(Suppl 1), 81-87.

Stickley, A., & Koyanagi, A. (2018). Physical multimorbidity and loneliness: A population-based study. *PLoS One, 13*(1), e0191651. Available online: https://doi.org/10.1371/journal.pone.0191651

Stillman, T.F., Baumeister, R.F., Lambert, N.M., Crescioni, A.W., DeWall, C.N., & Fincham, F.D. (2009). Alone and without purpose: Life loses meaning following social exclusion. *Journal of Experimental Social Psychology, 45*(4), 686-694. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2717555/

Stojanovic, J., Collamati, A., La Milia, D., Borghini, A., Duplaga, M., Rodzinka, M., Ricciardi, W., Magnavita, N., Moscota, U., & Poscia, A. (2016). Targeting loneliness and social isolation among the elderly: An update systematic review. *European Journal of Public Health, 26*(Suppl_1), ckw164.010. Available online: https://academic.oup.com/eurpub/article/26/suppl_1/ckw164.010/2448195

Storr, A. (1988). *Solitude: A return to the self*. New York: Simon & Schuster.

Sum, S., Mathews, R. M., Hughes, I., Campbell, A. (2008). Internet use and loneliness in older adults. *Cyberpsychology & Behavior, 11*(2), 208-211. Available online: https://www.researchgate.net/publication/5431128_Internet_Use_and_Loneliness_in_Older_Adults

Sutin, A.R., Stephan, Y., Carretta, H., & Terracciano, A. (2015). Perceived discrimination and physical, cognitive, and emotional health in older adulthood. *The American Journal of Geriatric Psychiatry*, *23*(2), 171-179. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4170050/

Syed, M.A., McDonald, L., Smirle, C., Lau, K., Mirza, R.M., & Hitzig, S.L. (2017). Social isolation in Chinese older adults: Scoping review for age-friendly community planning. *Canadian Journal on Aging, 36*(2), 223-245.

Tam, S., & Neysmith, S. (2006). Disrespect and isolation: Elder abuse in Chinese communities. *Canadian Journal on Aging, 25*(2), 141-151.

Tanskanen, J., & Anttila, T. (2016). A prospective study of social isolation, loneliness, and mortality in Finland. *American Journal of Public Health, 106*(11), 2042-2048. Available online: https://www.researchgate.net/publication/308173919_A_Prospective_Study_of_Social_Isolation_Loneliness_and_Mortality_in_Finland

Tarantola, A. (2017, August 29). Robot caregivers are saving the elderly from lives of loneliness. *Endgadget*. Available online: https://www.engadget.com/2017/08/29/robot-caregivers-are-saving-the-elderly-from-lives-of-loneliness/

Taube, E., Jakobsson, U., Midlöv, P., Kristensson, J. (2016). Being in a bubble: The experience of loneliness among frail older people. *Journal of Advanced Nursing, 72*(3), 631-640.

Tavakoli, A. (2017). *Supporting friendlier, more neighbourly multi-unit buildings in Vancouver*. University of British Columbia. Available online: https://sustain.ubc.ca/sites/sustain.ubc.ca/files/GCS/2017_GCS/Final_Reports/Supporting%20friendlier%20more%20neighbourly%20multi-unit%20buildings%20in%20Vancouver_Tavakoli_%202017%20GCS.pdf

Theeke, L.A., & Mallow, J.A. (2015). The development of LISTEN: A novel intervention for loneliness. *Open Journal of Nursing, 5*(2), 136-143. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4517603/

Theeke, L.A., Mallow, J.A., Gianni, C., Legg, K., Glass, C. (2015). The experience of older women living with loneliness and chronic conditions in Appalachia. *Journal of Rural Mental Health, 39*(2), 61-72. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4650889/

Theeke, L., Mallow, J.A., Moore, J., McBurney, A., Rellick, S., & VanGilder, R. (2016). Effectiveness of LISTEN on loneliness, neuroimmunological stress response, psychosocial functioning, quality of life, and physical health measures of chronic illness. *International Journal of Nursing Sciences, 3*(3), 242-251. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5656260/

Theurer, K., Brown, S., Mortenson, B., Suto, M., Stone, R.I., & Timonen, V. (2017,July 23). “It has given me a new life”: Peer mentoring in residential care. Poster presented at the 21st Annual World Congress of Gerontology and Geriatrics, San Francisco, CA. See also: https://www.grad.ubc.ca/psi/blog/9/kristine-theurer

Tijhuis, M.A.R., de Jong-Gierveld, J., Feskens, E.J.M., & Kromhout, D. (1999). Changes in and factors related to loneliness in older men: The Zutphen Elderly Study. *Age and Ageing, 28*, 491-495.

https://pdfs.semanticscholar.org/6b49/0c83060553921a7dba835712c4df92a33abd.pdf

Tillich, P. (1980). Loneliness and solitude. In Hartog, J., Audy, R. J., Cohen, Y. A. (Eds.), *The anatomy of loneliness* (pp. 547-553). New York, NY: International Universities Press.

Toepel, V. (2013). Ageing, leisure, and social connectedness: How could leisure help reduce social isolation of older people? *Social Indicators Research, 113*, 355-372. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3696179/

Totaljobs (2018, July 26). Loneliness causing UK workers to quit their jobs. Available online: http://press.totaljobs.com/release/loneliness-causing-uk-workers-to-quit-their-jobs/

Truchon, M. (2011). Cadre théorique des initiatives de travail de milieu auprès des aînés vulnérables. *Association québécoise des centres communautaires pour aînés* (AQCCA).

Tsai, H.H., & Tsai, Y.F. (2011). Changes in depressive symptoms, social support, and loneliness over 1 year after a minimum 3-month videoconference program for older nursing home residents. *Journal of Medical Internet Research, 13*(e93). Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222194/

Tse, M.M.Y. (2010). Therapeutic effects of an indoor gardening programme for older people living in nursing homes. *Journal of Clinical Nursing, 19*(7-8), 949-958.

Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. New York, NY: Basic Books.

Twenge, J.M., Baumeister, R.F., DeWall, C.N., Ciarocco, N.J., & Bartels, J.M. (2007). Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology, 92*(1), 56-66. Available online: http://www.uky.edu/~njdewa2/RejProsocJPSP.pdf

Ubido, J. (2014). *Rapid evidence review series: Loneliness*. Liverpool, UK: Liverpool Public Health Observatory. Available online: http://www.champspublichealth.com/sites/default/files/loneliness%20final.pdf

Uchino, B.N. (2006). Social support and health: A review of physiological processes potentially underlying links to disease outcomes. *Journal of Behavioural Medicine, 29*(4), 377-387. Available online: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.584.5721&rep=rep1&type=pdf

Umberson, D., Crosnoe, R., & Reczek, C. (2010). Social Relationships and Health Behavior Across Life Course. *Annual Review of Sociology*, *36*, 139-157. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3171805/

United Kingdom Government, Department for Work & Pensions (2015). *2010 to 2015 government policy: Older people*. London, UK: Author.

United Kingdom Government (2018, January 17). PM commits to government-wide drive to tackle loneliness. Available online: https://www.gov.uk/government/news/pm-commits-to-government-wide-drive-to-tackle-loneliness

United States Postal Service (2017). *Postal facts*. Available online: https://about.usps.com/who-we-are/postal-facts/postalfacts2017-v2.pdf

United States Postal Service, Office of the Inspector General (2016). *The postal service and cities: A "smart" partnership*. Available online: https://www.uspsoig.gov/document/postal-service-and-cities-smart-partnership

United States Senate, Joint Economic Committee (2018). All the lonely Americans? Available online: https://www.lee.senate.gov/public/index.cfm/2018/8/all-the-lonely-americans

Vaismoradi, M., Wang, I.-L., Bondas, T., & Turunen, H. (2016). Older people's experiences of care in nursing homes: A meta-synthesis. *International Nursing Review, 63*(1), 111-121. Available online: https://brage.bibsys.no/xmlui/handle/11250/2381943

Valtorta, N.K., Collingridge, D., Barron, L., Stow, D., & Hanratty, B. (2018). Older adults' social relationships and health care utilization: A systematic review. *American Journal of Public Health, 108*(4), e1-e10. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5844393/

Valtorta, N.K., & Hanratty, B. (2012). Loneliness, isolation and the health of older adults: Do we need a new research agenda? *Journal of the Royal Society of Medicine, 105*(12), 518-522. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3536512/

Valtorta, N.K., Kanaan, M., Gilbody, S., & Hanratty, B. (2016a). Loneliness, social isolation and social relationships: What are we measuring? A novel framework for classifying and comparing tools. *BMJ Open, 6*(4). Available online: http://bmjopen.bmj.com/content/6/4/e010799

Valtorta, N.K., Kanaan, M., Gilbody, S., & Hanratty, B. (2016b). Changes in loneliness and social isolation over time in adults aged over 50: The English Longitudinal Study of Ageing. Poster presented at the 60th Annual Scientific Meeting of the Society for Social Medicine, University of York.

Valtorta, N., Kanaan, M., Gilbody, S., Ronzi, S., & Hanratty, B. (2016c). Loneliness and social isolation as risk factors for coronary heart disease and stroke: Systematic review and meta-analysis of longitudinal observational studies. *Heart, 102*(13), 1009-1016. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4941172/

van der Geest, S. (2004). "They don't come to listen": The experience of loneliness among older people in Kwahu, Ghana. *Journal of Cross-Cultural Gerontology, 19,* 77-96. Available online: http://www.sjaakvandergeest.socsci.uva.nl/pdf/ageing/loneliness_2004_JCCG.pdf

van der Ryn, S. (2013). *Design for an empathic world: Reconnecting people, nature, and self*. Washington, DC: Island Press.

van Lisdonk, J., & Kuyper, L. (2015). *55-plussers en seksuele oriëntatie*. The Hague, Netherlands: Sociaal en Cultureel Planbureau. Available online: https://www.scp.nl/Publicaties/Alle_publicaties/Publicaties_2015/55_plussers_en_seksuele_ori_ntatie

van Staden, W.C., & Coetzee, K. (2010). Conceptual relations between loneliness and culture. *Current Opinion in Psychiatry, 23*(6), 524-529.

van Tilburg, T.G. (1990). The size of the supportive network in association with the degree of loneliness. In C.P.M. Knipscheer, & T.C. Antonucci (Eds.), *Social research: Substantive issues and methodological questions* (pp. 137-150). Lissa, The Netherlands: Swets & Zeitlinger.

van Tilburg, T.G., & de Jong Gierveld, J. (1999). Cesuurbepaling van de eenzaamheidsschaal [Cutting scores on the de Jong Gierveld Loneliness Scale]. *Tijdschrift voor Gerontologie en Geriatrie, 30*, 158-163. Available online: https://research.vu.nl/ws/portalfiles/portal/1092187

Vancouver Coastal Health (2015). *My health, my community: Vancouver community health profile*. Available online: https://www.myhealthmycommunity.org/Portals/0/Documents/Community%20Profiles/Vancouver_final.pdf

Vancouver Coastal Health (2018). *Social connection and health*. Available online: http://www.vch.ca/about-us/news/news-releases/social-connection-is-a-key-health-indicator-for-lower-mainland-residents-survey-finds

Vancouver Foundation (2012a). *Connections and engagement: A survey of Metro Vancouver*. Available online: https://www.vancouverfoundation.ca/sites/default/files/documents/VanFdn-SurveyResults-Report.pdf

Vancouver Foundation (2012b). The effect of apartment living on neighbourliness. Available online: https://www.vancouverfoundation.ca/sites/default/files/documents/Van-Fdn-Effect-of-apartment-living-on-neighbouliness.pdf

Vancouver Foundation (2017). *Connect & engage: A survey of Metro Vancouver*. Available online: https://www.vancouverfoundation.ca/about-us/publications/connections-and-engagement-reports/connect-engage-2017-report

Vanhalst, J., Goossens, L., Luyckx, K., Scholte, R.H., & Engels, R.C. (2013). The development of loneliness from mid- to late adolescence: Trajectory classes, personality traits, and psychosocial functioning. *Journal of Adolescence, 36*(6), 1305-1312.

Vanhalst, J., Soenens, B., Luyckx, K., Petegem, S.V., Weeks, M.S., & Asher, S.R. (2015). Why do the chronically lonely stay lonely? Chronically lonely adolescents'

attributions and emotions in situations of social inclusion and exclusion. *Journal of Personality and Social Psychology, 109*(5), 932-948.

Victor, C.R. (2011). Loneliness in old age: The UK perspective. In *Safeguarding the convoy: A call to action from the Campaign to End Loneliness* (pp. 23-30). London, UK: Campaign to End Loneliness. Available online: https://www.campaigntoendloneliness.org/wp-content/uploads/downloads/2011/11/Safeguarding-the-convey.-A-call-to-action-from-the-Campaign-to-End-Loneliness.pdf

Victor, C.R., (2012). Loneliness in care homes: A neglected area of research? *Aging Health, 8*(6), 637-646.

Victor, C.R., & Bowling, A. (2012). A longitudinal analysis of loneliness among older people in Great Britain. *The Journal of Psychology*, *146*(3), 313-331.

Victor, C.R., Scambler, S., Bond, J., & Bowling, A. (2000). Being alone in later life: Loneliness, social isolation and living alone. *Reviews in Clinical Gerontology, 10*(4), 407-417.

Victor, C.R., Scambler, S., Bowling, A., & Bond, J. (2005).The prevalence of, and risk factors for, loneliness in later life: A survey of older people in Great Britain. *Ageing & Society, 25*(3), 357-376. Available online: https://www.researchgate.net/publication/32886168_The_prevalence_of_and_risk_factors_for_loneliness_in_later_life_A_survey_of_older_people_in_Great_Britain

Victor, C.R., Scambler, S.J., Marston, L., Bond, J., & Bowling, A. (2006). Older people's experiences of loneliness in the UK: Does gender matter? *Social Policy and Society, 5*(1), 27-38.

Victor, C.R., Scambler, S.J., Shah, S., Cook, D.G., Harris, T., Rink, E., & de Wilde, S. (2002). Has loneliness amongst older people increased? An investigation into variations between cohorts. *Ageing and Society, 22*(5), 585-597.

Victor, C.R., & Yang, K. (2012). The prevalence of loneliness among adults: A case study of the United Kingdom. *Journal of Psychology, 146*(1-2), 85-104.

Vigil, J.M. (2007). Asymmetries in the friendship preferences and social styles of men and women. *Human Nature, 18*(2), 143-161.

Vitkus, J., & Horowitz, L.M. (1987). Poor social performance of lonely people: Lacking a skill or adopting a role? *Journal of Personality & Social Psychology, 52*(6), 1266-73.

Wang, Q., Fink, E.L., & Cai, D.A. (2008). Loneliness, gender, and parasocial interaction: A uses and gratifications approach. *Communication Quarterly, 56*(1), 87-109.

Waterson, H. (2014, April 29). No more lonely deaths: Our promise to the older people of Adachi in Japan. *The Guardian*. Available online: https://www.theguardian.com/local-government-network/2014/apr/29/no-more-lonely-deaths-older-people-adachi-japan

Watson, J., & Nesdale, D. (2012). Rejection sensitivity, social withdrawal, and loneliness in young adults. *Journal of Applied Social Psychology, 42*(8), 1984-2005.

Waytz, A. (2017, October 4). The dangers of mandatory fun. *Harvard Business Review.* Available online: https://hbr.org/2017/10/the-dangers-of-mandatory-fun#

Weijs-Perree, M., van den Berg, P., Arentze, T., & Kemperman, A. (2015). Factors influencing social satisfaction and loneliness: A path analysis. *Journal of Transport Geography, 45*(32), 24-31. Available online: https://www.researchgate.net/publication/277089817_Factors_influencing_social_satisfaction_and_loneliness_A_path_analysis

Weiss, R.T. (1973). *Loneliness: The experience of emotional and social isolation*. Boston: MIT Press.

Wenger, G.C., & Burholt, V. (2004). Changes in levels of social isolation and loneliness among older people in a rural area: A twenty-year longitudinal study. *Canadian Journal on Aging, 23*(2), 115-127. Available online: https://www.iscet.pt/sites/default/files/imce/changes_levels_social_isolation_loneliness_older_people_rural_area.pdf

Wesselmann, E.D., Cardoso, F.D., Slater, S., & Williams, K.D. (2012). To be looked at as through air. *Psychological Science, 23*(2), 166-168. Available online: https://doi.org/10.1177/0956797611427921

White, E. (2010). *Lonely*. Toronto: McLelland & Stewart.

White, J.T., & Gendron, T.L. (2016). LGBT elders in nursing homes, long-term care facilities, and residential communities. In D. Harley & P. Teaster (Eds.), *Handbook of LGBT elders* (pp. 417-437). Cham, Switzerland: Springer International.

Whitfield, K.Y., Daniels, J.S., Flesaker, K., & Simmons, D. (2012). Older adults with hoarding behaviour aging in place: Looking to a collaborative community-based planning approach for solutions. *Journal of Aging Research, e205425*. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3195538/

Whyte, W.H. (1980). *The social life of small urban spaces*. Washington, DC: The Conservation Foundation.

Williams, K., Kemper, S., & Hummert, M.L. (2003). Improving nursing home communication: An intervention to reduce elderspeak. *The Gerontologist, 43*(2), 242-247. Available online: https://www.researchgate.net/publication/10820960_Improving_Nursing_Home_Communication_An_Intervention_to_Reduce_Elderspeak

Wilson, C., & Moulton, B. (2010). *Loneliness among older adults: A national survey of adults 45+*. Washington, DC: American Association of Retired Persons. Available online: https://www.aarp.org/research/topics/life/info-2014/loneliness_2010.html

Wilson, K., Kortes-Miller, K., & Stinchcombe, A. (2018). Staying out of the closet: LGBT older adults' hopes and fears in considering end-of-life. *Canadian Journal on Aging, 37*(1), 22-31.

Wilson, R.S., Krueger, K.R., Arnold, S.E., Schneider, J.A., Kelly, J.F., Barnes, L., Tang, Y., & Bennett, D.A. (2007). Loneliness and risk of Alzheimer disease. *Archives of*

General Psychiatry, *64*(2), 234-240. Available online: https://pdfs.semanticscholar.org/062e/672554efe34d0e12a0775b908f9bda9af159.pdf

Wilson, T.D., Reinhard, D.A., Westgate, E.C., Gilbert, D.T., Ellerbeck, N., Hahn, C., Brown, C.L., & Shaked, A. (2014). Just think: the challenges of the disengaged mind. *Science, 345*(6192), 75-77. Available online: https://wjh-www.harvard.edu/~dtg/WILSON%20ET%20AL%202014.pdf

Wister, A. (In press). *Aging as a social process: Canadian Perspectives.* (7th Ed.). Don Mills, Ontario: Oxford University Press Canada.

Wister, A., & Menec, V. (2018). Loneliness, social isolation, and social engagement. In P. Raina, C. Wolfson, S. Kirkland, & L. Griffith (Eds.), *The Canadian Longitudinal Study on Aging (CLSA): Report on Health and Aging in Canada*. Hamilton, Ontario: CLSA. Available online: https://www.clsa-elcv.ca/doc/2639

Wong, P.T.P. (2015). A meaning-centered approach to overcoming loneliness during hospitalization, old age, and dying. In A. Shaked and A. Rokach (Eds.), *Addressing loneliness: Coping, prevention and clinical interventions.* New York, NY: Routledge. Available online: http://www.drpaulwong.com/a-meaning-centered-approach-to-overcoming-loneliness-during-hospitalization-old-age-and-dying/

Wrzus, C., Hänel, M., Wagner, J., & Neyer, F.J. (2013). Social network changes and life events across the life span: A meta-analysis. *Psychological Bulletin, 139*(1), 53-80. Available online: https://www.semanticscholar.org/paper/Social-network-changes-and-life-events-across-the-a-Wrzus-H%C3%A4nel/bc4df1e47741ab0457c771297ff010b7c27e677e

Yalom, I. (1980). *Existential psychotherapy*. New York, NY: Basic Books.

Yang, K., & Victor, C. (2011). Age and loneliness in 25 European nations. *Ageing and Society, 31*(8), 1368-1388.

Yang, K. (2018). Longitudinal loneliness and its risk factors among older people in England. *Canadian Journal on Aging, 37*(1), 12-21. Available online: http://dro.dur.ac.uk/23848/1/23848.pdf

Yang, Y., Boen, C., Gerken, K., Li, T., Schorpp, K., & Harris, K. (2016). Social relationships and physiological determinants of longevity across the human life span. *Proceedings of the National Academy of Sciences of the United States of America,113*(3), 578-578. Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4725506/

Young, J.E. (1982). Loneliness, depression and cognitive therapy: Theory and application. In L.A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 379-405). New York, NY: Wiley.

Zandstra, S.M., van Rijswijk, E., Rijnders, C.A., van de Lisdonk, E.H., Bor, J.H., van Weel, C., & Zitman, F.G. (2004). Long-term benzodiazepine users in family practice: Differences from short-term users in mental health, coping behaviour and psychological characteristics. *Family Practice, 21*(3), 266-269.

Zhong, B.L., Chen, S.L., & Conwell, Y. (2016). Effects of transient versus chronic loneliness on cognitive function in older adults: Findings from the Chinese Longitudinal Healthy Longevity Survey. *American Journal of Geriatric Psychiatry, 24*(5), 389-398. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4846538/

Zhong, B.L., Chen, S.L., Tu, X., & Conwell, Y. (2017). Loneliness and cognitive function in older adults: Findings from the Chinese Longitudinal Healthy Longevity Survey. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 72*(1),120-128. Available online: https://doi.org/10.1093/geronb/gbw037