Determining Whether the Built Environment Affects Social Isolation in Queer Older Adults Living in the Suburbs.

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Abstract

The purpose of this paper is to review and discuss the ways in which the built environment influences the amount of social isolation felt by LGBTQ2+, or queer, older adults. Through a process of trial and error, this paper evolved from a qualitative study, interviewing queer older adults in their suburban homes, to a comprehensive review of the existing literature. In doing so, the gaps and inadequacies of the existing literature illuminates the reason why it is important to study the built environment and its effects on queer older adults. By studying how the built environment affects queer older adults who are ageing-in-place, a greater conversation on how the built environment affects all of us. A majority of the research has been quantitative in nature, dehumanizing the realities of those suffering from social isolation. This paper, through process, become a steppingstone towards enabling future, qualitative, research regarding the effects of the built environment on socially isolated queer adults, as well as other vulnerable demographics.

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Introduction

From their inception as the bourgeoisies' rural getaway to the modern cookie-cutter cul-de-sacs, the suburbs are a contentious place to study. If a scholar is not researching the environmental impacts of needless land expansion, another has theorized the sociological effects of suburbanization during the second half of the 20th century. Not until the 21st century has the impending wave of ageing adults, globally, been considered seriously. Not because the populous has tirelessly advocated for the humanization of our collective later stages of life, unfortunately, but because their numbers have and continue to grow exponentially.

According to the United Nation's Department of Economic and Social Affairs 2017 report on World Population Prospects, those aged 60+ are projected to double to 2.1 billion by 2050 and triple to 3.1 billion by 2100 from 962 million in 2017, making them the fastest growing age group (United Nations, 2015). Between 2006 - 2011, Canada experienced a 14.1% population growth of older adults aged 65+ with the forecasted senior population to reach 24% of the total population by 2036 (Statistics Canada, 2013). This projection is likely to be exceeded given that between 2011 and 2016, there was a historic 20% increase of adults aged 65+ compared to the Canadian average of 5% (Statistics Canada, 2015). The median age of the Canadian population is now 35 years and will reach 45 years within the next three decades. It is estimated that by 2021 about 1 in 5 Canadians will be 65 years or older (Paez et al., 2007).

Although there is an increasing acknowledgment of the benefits to older adults in continuing to participate in their community and an increase in reported quality of life (Bartley and O'Neill, 2010), issues of health, housing, and income typically dominate policy discussions pertaining to older adults. The World Health Organization's (2002) original Active Ageing policy defined

community participation along with health and security as the three key contributors to quality of life in older age. Healthy, active living in older age is conceptualised as an outcome of an ageing process, that would allow equal opportunities and treatment for people, at all stages of their life, regardless of their abilities (Walker, 2002). The World Health Organisation (2015) advises that governments encourage the creation of age-friendly places that can be described as places that promote a healthy lifestyle, social participation, and security.

Ageing-in-place has been touted as a much sought-after way of life for older adults (Cutchin, 2003). This is unsurprising when considering the significance of an older adult's life, as well as their identities, are intertwined with their homes and communities. As the population of Canada continues to age, many those older adults 65 years and older will inevitably live in environments that require the use of an automobile. With 66% of Canadians living in car-dependent environments (Miller, 2017), those who chose to age-in-place will face barriers to maintaining healthy, independent lifestyles; either unable to operate or possibly afford a personal car, older adults are forced to utilize potentially unreliable suburban public transportation, rely on family and friends to traverse their communities or at worst navigating the sidewalk-deprived streets by foot. (Tacken, 1998; Burns, 1999; Rosenbloom, 2001).

There is an assumption that seniors are incapable of being self-sustaining individuals after a certain age, but this is far from truth. Studies show that older adults can maintain in-home dependence if they keep a reasonable level of physical activity in their daily lives (Tinker 2002; King, 2001; Simonsick et al, 2005). An overwhelming amount of older adults who prefer to age-in-place do so for the most obvious reason: they're most comfortable in their homes; followed by an aversion or inability to accept the additional financial costs related to moving (Sixsmith, 2008; Costa-Font, Elvira, Mascarilla-Miro, 2009). Older adult's propensity to age-in-place, in all

forms of the built environment, but specifically in those less walkable and transit friendly, increase the potential of becoming socially isolated in communities as older adult's mobility becomes limited (Burkhardt, 1999). Social isolation and loneliness exact a significant toll on the psychological and physical health of all persons, but disproportionately affects older adults in comparison to the general population (Cohen, 2000; Sorkin, Rook, Lu, 2002).

Research has shown that isolation is related to negative health outcomes and that social support in various forms are associated with positive health outcomes (Cohen, Syme, 1985). What research has also shown is that older adults who are female, low-income, a person of colour, queer, widowed or experiencing familial conflict and ageism are most likely to experience social isolation (Bosworth, 1997; de Jong Gierveld, 1995; Locher et al., 2004; Torres, 1992; Wenger et al. 1996). Social isolation experienced by older adults ageing-in-place is a critical health concern that, if unaddressed, can lead to many negative health outcomes as older adults spend the last years of their lives alone.

While research on LGBTQ2+ (termed 'queer' as related to this paper) older adults has increased dramatically in the past two decades, their existence in gerontological research is a recent addition to the discipline. It is imperative that government bodies and healthcare systems adequately research the ways in which queer adults age-in-place, given the attachment and sense of security from discrimination their home gives them (City and County of San Francisco, 2003; Heaphy, 2003; Hughes, 2005; Kirby, 1997; McFarland, 2003; Orel, 2004; River, 2006). Studies have found that queer older adults statistically have more chronic illnesses and less familial support in comparison to their heterosexual peers (Orel 2015), leaving them more vulnerable to social isolation in suburban built environments.

Queer older adults are an invisible minority, within an invisible minority; ageism and ableism is experienced in both communities by queer older adults, not quite 'fitting in' with their larger peer groups. It is important to humanize the reality of both heterosexual, and more specifically, queer older adults, who are becoming increasingly isolated. My hope is to shed light on their current and future struggles *by sharing their stories*. In doing so, providing a greater impetus to retrofit the suburban built environment as well as the planning policies that no longer serve current residents, both old and new.

While past research on suburban development has been beneficial in understanding how various family-oriented demographics call the suburbs home, very little effort has been put towards understanding the lived realities of queer older adults in these environments. As populations continue to age, a greater number of older adults will reside in suburban neighbourhoods and towns, increasing the likelihood of a demographic suffering from impaired overall mobility.

Methodology

As is the case with all research processes, the design of this paper began as a qualitative study on whether the suburban built environment negatively affected queer older adults, specifically in the form of social isolation. However, the availability of data surrounding social isolation of queer older adults is abysmal at best; when adding the layer of the built environment, the data becomes nonexistent. Even within the context of the general older adult population, research on social isolation as a result of the built environment is extremely limited in its scope and never diving below the surface.

In order to better understand the daily lives of queer older adults, it was necessary to reach out to various LGBTQ2 organizations that either specifically catered to older adults or had a division

within a larger organization that did. To ensure that a large enough number of organizations were contacted, and that one would respond, the search was limited to large metropolitan areas in Canada and the United States. In doing so, it allowed for a continuously similar built environment to be studied while increasing the likelihood of potential participants. This approach was a result of two separate senior centres, in different cities, never returning my emails or calls to volunteer. An unfortunate setback of being unable to volunteer due to the importance of giving back to the community of study.

In order to do so, the questions that had to be answered were:

- Do queer older adults who choose to age-in-place, in their suburban homes, perceive themselves to experience more social isolation in comparison to their heterosexual and urban peers?
- What barriers prevent them from accessing the necessary social and institutional supports in their community? Are they social, environmental, or both?
- How can their lived realities help influence urban planning practices?

While this paper covers the range of variables that effect older adults, more specifically queer, levels of social isolation and health issues in suburban environments experienced are still unknown. Data is often detached, a person detailing their opinions less so, but by using storytelling as a medium, the life on the individual becomes tangible and real. This paper is a foundational piece that could lead to further studies relating to the lives of queer older adults across varied urban environments.

The History of Suburbs in North America

As varied as any built environment, suburbia has seen a dramatic evolution since its inception during the 19th century. Although the suburbs of today are associated with the middle-class family, both as an independent municipality or as a neighbourhood within a larger city, they began as the aristocracy's privilege in exploring the countryside (Hayden, 2004). As technological advancements in industrial production and transportation improved, accessibility to the borderlands, once utilized solely by the aristocracy, became available to the bourgeoise class, resulting in the creation of picturesque enclaves for the wealthy (Hayden, 2004).

Since the late 19th century, the malleability of the suburbs in relation to technological advancement had kept steady pace until the current era. With the introduction of streetcars, potential suburban towns became more accessible to the middle classes (Hayden 2004), while providing the working class with reliable transportation to the urban fringe, where cheap land encouraged industrial growth and the eventual creation of working-class dormitory suburbs (Harris, 1943). Following the World Wars, the expansion of the city and its absorption of the immediate suburbs accelerated as the result of the automobile's proliferation. While the suburbs morphed and expanded around them, existing communities were adapting their homes to best suit their future familial needs.

A study on Canadian wartime housing found that suburban families, expanding their homes in response to changing family sizes, were engaging with an ever-changing lifecycle of suburban environments (Evenden, 1997). Over the course of 40 years, Evenden (1997) showed how the owners of these homes had become 'co-producers' with the original developers, transforming not only their homes but the cultural landscape as a result. In another study focusing on the propensity of homeowners to remodel in North Vancouver, Evenden found that remodeling the

home was most prominent during ‘child-rearing years’ (Evenden, 1991). These findings explored by Evenden are further reinforced through the research conducted by Kelly (1993) regarding the adaptation of Levittown(s) built by William Levitt and sons.

Kelly (1993) came to the same conclusion as Evenden (1997), that homeowners were ‘co-producers’ within their homes and community. In contrast to Evenden (1991), Kelly’s (1993) research focused on the adaptations that come following child-rearing years, finding that homes were mostly remodeled to accommodate elderly parents in separate granny flats, maintaining bedrooms for adult children or by subdividing houses into rental units (Kelly, 1993).

As the expansive suburban dream became increasingly accessible by the 1980’s, the suburbs located closest to the central core of the city had long shifted their demographic and spatial identities. McManus and Ethington (2007) named these transitions of identity as group succession, wherein different classes and ethnicities move into a neighbourhood or suburb, adapting its culture and use to fit their needs. Group succession can be seen within the context of Canada and the United States, given both countries loosened immigration from countries outside of Europe in 1976 (Boyd, 2000) and 1968 (Jasso and Rosenzweig, 1990**)** respectively. McManus and Ethington (2007, pg. 327) eloquently describe the transformation as a form of continuous rebirth:

> “…every suburb, once planted, eventually evolves in a way that incorporates both continuity and change, in terms of the built and social fabric. Generations of families go through their lifecycles in these places; successions of socio-economic or race-ethnic groups lay claim to these places; residents enacting these life-cycles tear down and rebuild these places. Their history extends far beyond the history of their founding and is constituted in the layers produced during each cycle.”

While this analysis of group succession is ignorant of gentrification and modeled as an equal utilization cycle, one class or ethnicity group relocates as another is willing to move in, it is still useful. Whitehand (1994) has called for a focus on our urban environments in order to 'understand the cyclical processes of adaptation and renewal'. Whitehand goes on to say, "Each society leaves its mark on the landscape, creating forms that reflect the aspirations and problems of its day. Urban landscapes…are a physical record of past societies, and of our own, waiting to be read" (Whitehand, 1994).

Research prior to the 21st century focused on the lived realities of families and their evolution within suburbia; while this has been beneficial in understanding how various familial demographics call the suburbs home, very little effort has been put towards understanding the lived realities of older adults in these environments. As populations continue to age, a greater number of older adults will reside in suburban neighbourhoods and towns, increasing the likelihood of a demographic suffering from impaired overall mobility. Research (Alley et al., 2007) demonstrated that the built environment does have an influence on both quality of life and mobility of older adults and as the daily distances they are required to travel shrink, the neighbourhoods of older adults and the built environment becomes increasingly important in their lives (Golant, 1984; Horgas, 1998; Schwanen, 2001).

Ageing-in-Place and Mobility

Ageing-in-place is marketed by governments and healthcare providers as a sought-after way of life for older adults (Cutchin, 2003) because it provides two key benefits: "older adults will feel independent rather than a burden to others in society and society will not be financially burdened by older people" (Byrnes et al., 2006, p.55). While lacking all emotion, the 'un-burdening' of older adult's children and the social health system enables ageing populations to continue being independent. While this ideal is plausible in perfect situations, ageing-in-place is not always viewed in such a positive light by those who are doing it. Studying the terminology of ageing-in-place, Wiles (2012) found that the goals in policy papers differ from those of older adults, suggesting that the phrase 'ageing-in-place' is not as straight-forward as policy papers would suggest. Most seniors were not aware of the term and some felt that it held a negative connotation, such as being 'stuck-in-place' (Wiles 2012).

Those who age-in-place will face barriers to maintaining healthy, independent lifestyles in suburban environments due to the potential inability of operating or affording a personal car, forcing older adults to utilize potentially unreliable public transportation or rely on family and friends to navigate their long-time community (Tacken, 1998; Burns, 1999; Rosenbloom, 2001). As the population of older adults rises, they are increasingly found in the furthest suburbs at the edges of cities (McNairnay, 2011). The suburban environment has become the predominant urban form in Canada, being defined as a predominantly suburban country (Moos, 2012), leaving many older Canadians to live in potentially unhealthy environments.

In a study on the daily mobility of older adults across multiple density levels in Bonn, Germany, only 29% of older adults in low-density suburbs did their daily shopping within their own neighbourhood compared to 92% in high-density neighbourhoods (Fobker & Grotz 2006). Older

adults who lived closest to the city centre were found to take more short trips (<1km) in comparison to low-density neighbourhoods, which is important given that 70% of interviewees reported visiting a café or pub within the previous 12 months (Fobker & Grotz 2006).

One study of older adults' mobility in Winnipeg showed that 71% of older adults are willing to travel further (>2km) for social and recreational purposes than they are necessary services; this could be because only 22% live within 2 kilometres of their most visited friend or family (Smith & Sylvestre 2001). It becomes clear that mobility is a key determinate in the ability of older adults to foster and maintain social relations (Carp 1988). While maintaining auto-focused independence of mobility in old age is possible for a time, driving can eventually become too dangerous or intimidating for older adults. As a result of limiting their activities by reducing the frequency, distance and location of their trips**,** older adults become the most burdened by an inevitable reduction or cessation of driving in monetary, social and psychological costs (Burkhardt, 1999).

There is also a symbolic value associated with driving, leaving many older adults to feel a sense of uselessness and loss of independence after they are no longer able to drive (Dobbs 1998). Rothe's (1994) interviewees expressed that losing their license would directly affect their self-respect, ability to socialize, independence and quality of life. A third of interviewees stated that the lose of their license would have a significant negative emotional impact on them (Rothe 1994). It is not solely about the car itself but a sense of control over their own lives. The feelings associated with less autonomy and increased isolation are not positively enhanced by being a passenger (Carp 1972) leaving walking as the last mode of independent mobility that older adults possess but unfortunately are not always capable of acting upon.

Healthy Ageing and Active Living

Healthy and active living in older age is conceptualised as an outcome of an ageing process that allows equal opportunities and treatment for people at all stages of life, regardless of their personal characteristics (Walker, 2002). There is an increasing acknowledgment that the quality of life of seniors depends on their ability to maintain participation within the community (Bartley and O'Neill, 2010), but often issues of health, housing and income typically dominate policy discussions around older adults. The World Health Organization's (2002) original *Active Ageing* policy defined three key contributors to quality of life in older age: community participation, health and security. While *Active Ageing* (World Health Organization, 2002) laid the groundwork for recommendations and adaptations of the built environment, the policies that followed would deviate from this focus.

Four years later, the Public Health Agency of Canada produced a significant report titled *Healthy Aging in Canada* which introduced the term "age-friendly" into the lexicon of planning (Healthy Aging in Canada, 2006). The term age-friendly was designed to acknowledge that a well-designed built environment was capable of mitigating, "chronic diseases and disabilities, potentially reducing health care costs and helping postpone or avoid transition to a long-term care facilit[y]" (Healthy Aging in Canada, 2006). A principal author of the *Healthy Aging in Canada*, Louis Plouffe, played an integral part during the international consultation led by the United Nations in 2006 leading up to *The Global Age-Friendly Cities* project (Miller, 2017).

The Global Age-Friendly Cities project involved the participation of older adults from 33 cities around the world who submitted their opinions on how cities can best adapt to a growing elder population, leading to the 2007 publication of Global Age-Friendly Cities: A Guide (World Health Organization, 2007). Although a key goal of the *Global Age-Friendly Cities* initiative is

to make the built environment of a city more appropriate for older adults while simultaneously improving the accessibility of services for seniors, five of the eight main topics give priority to social and experiential facets of urban living that affect quality of life—only three are directly related to the built environment (World Health Organization, 2007).

In 2011, the United States Environmental Protection Agency combined principles of city planning and gerontology to establish four categories of age-friendly communities: staying active and connected, neighbourhoods and housing, transportation and mobility, and reliable access to health activities (U.S. EPA Aging Initiative, 2011). Aspects of an age-friendly community includes nearby goods, services and amenities; transportation other than an automobile; adequate housing and neighbourhoods; access to social support; and opportunities to participate in purposeful activities (Hanson, 2006; Scharlach, 2013). If it has not become clear, the definitions of an age-friendly environment are varied but at core share the same tenants. Age-friendly environments allow "older adults [to be] actively involved, valued, and supported with infrastructure and services that effectively accommodate their needs" (Alley et al., 2007).

In 2015, the World Health Organization renamed the Active Ageing (World Health Organization, 2002) initiative Healthy Ageing (World Health Organization, 2015), with a notable difference between the recommendations of *Active Ageing* that focused on environmental adaptations and the design of the built environment to *Healthy Ageing*, oriented towards greater access to social and health services. The World Health Organisation advises that governments encourage the creation of age-friendly places which are described as places that promote a healthy lifestyle, continued social participation and personal security throughout the ageing process (World Health Organization, 2015).

While *Active Ageing* (World Health Organization, 2002) focused predominantly on developed countries adaptation to an ageing society, *Healthy Ageing* (World Health Organization, 2015) begins to acknowledge the reality of older adults in developing countries. While important to further increase the representation of older adults on a global scale, this inclusion shifts the focus of the World Health Organization's ageing initiative from adaptations of the built environment to access to healthcare and pensions. This is not an insignificant shift given that sprawling environments are dramatically unhealthy for most older adults (Sturm & Cohen, 2004).

In 2016, the Canadian Urban Institute assessed the official plans of Ontario's 27 largest municipalities to identify which had made any tangible progress in achieving recommendations set out by the Age-Friendly Cities framework—of the 25 municipalities who are participating, none have integrated the recommendations into their official plans (Miller, 2017). This issue is not new in the Ontarian planning zeitgeist. In 1983, the Ontario Ministry of Municipal Affairs and Housing published a report titled *Towards Community Planning for an Aging Society*, emphasizing the relationship between the built environment and social aspects of the community (Ontario Ministry of Municipal Affairs and Housing 1983; N.D.). The report stressed that the default mode of development constructing single detached houses "disadvantage[s older adults] both by separation of uses and by distance to facilities and services…Mobility becomes more difficult because of either cost or diminishing physical abilities." (Ontario Ministry of Municipal Affairs and Housing N.D.).

As a result of our continued suburbanization for the past century, many older adults will be left to age-in-place in environments that are intrinsically designed against their needs and abilities. The neighbourhood is an important environment for older adults, having "been exposed" (Lehning, 2014) to its characteristics for an extended period of time and more readily relying on

their immediate social and physical environments due to changes in daily activities and reductions in social networks (Glass, 2003).

Older adults are given a false narrative of ableism, feeling they are 'unfit' to live in their home anymore is due to their weaknesses and that age is inherently limiting because of an inability to navigate their home, making them both the victim and perpetrator; whereas the planners and policies that perpetuate outdated models of suburbanization are frequently to blame for both physically and socially isolating vulnerable older adults in their homes. Older adults interviewed in Edmonton, Alberta overwhelming believed that as individuals, they are the ones who must adapt to the limitations of the built environment (Garvin, 2012). Society assumes that people are incapable of being self-sustaining individuals past a certain age. Since the ubiquity of industrial capitalism, the value of a human life has been intrinsically tied to productivity while, simultaneously, retirement was designated a period of non-productivity (Baltes & Carstensen 1996). Scientific study directed at the negative aspects of ageing also further cemented the myth that growing and being older meant a constant state of decay and uselessness as a result (Baltes & Carstensen 1996) but this is false.

Tinker (2002) studied adults aged 65+ and found that while the very old (85+) were more likely to have longstanding illnesses, limiting their activities compared to their younger peers, many old and very old adults are physically and mentally fit**.** For example those aged 80 and over in England and Wales, 51% of men and 46% of women had no limiting long-standing illness, 54% of men and 33% of women had no difficulty with any domestic task, and 17% of men and 9% of women had given regular help to someone outside their household (Tinker, 2002). It has also been accepted that cognitive decline is intermarried with the ageing process, but research has shown otherwise. A meta-analysis conducted by Colcombe and Kramer (2003**)** studied the

relationship between fitness and cognition, finding that aerobic exercise has a significant effect on the cognition and continued physical ability in relation to a control group.

The Role of the Built Environment

While most conversations about ageing-in-place focus on the home, an increasing interest in how neighbourhoods and communities correlate with older adults ability to stay in their home is growing in disciplines such as environmental gerontology (Oswald, 2010). Older adults have greater awareness of their neighbourhoods due to the longevity of residence and changing levels of mobility (Glass, 2003; Howden-Chapman et al., 1999). Consideration of the built environment is particularly pertinent for older adults. As older adults age, they are likely to spend more time in their home and community environments, and declining health and functional status can make them more susceptible to barriers in them (Clarke, 2009). According to Liu et al. (2009), research suggests that wellbeing in later life is closely related to the physical environment, which is an important mediator of ageing experiences and opportunities. However, while there is some evidence that the built environment makes a difference in healthy ageing, there is little understanding of which individual design characteristics are important. The use of objective measures of the built environment has been growing in recent years, mainly through research on obesity (Feng et al., 2010).

Street accessibility and connectivity is a central factor in encouraging or discouraging walking in older adults due to the distance between destinations (Frank et al., 2008). In sprawling cities, older adults who no longer drive may have difficulty walking the required distances necessary to reach places such as supermarkets, health related services or parks. To ensure older adults age-in-place successfully, the conversation needs to shift from housing to transportation, infrastructure, recreation, and urban amenities that encourage physical activity, socialization and

cultural engagement (Wahl & Wiseman 2003). A five year study conducted in Tokyo found that out of 2211 participants, those who survived were most likely to live near a place they could take a walk, that had parks and tree lined streets, and had a preference to ageing-in-place (Takano, Nakamura, Watanabe 2002).

The car-oriented urban form contributes to the number of elderly 'shut-ins' and increasing sedentary lifestyles (Sturm & Cohen, 2004). Those who age-in-place face barriers to maintaining healthy, independent lifestyles in suburban environments due to their inability to operate or potentially afford a personal car, forcing older adults to utilize potentially unreliable public transportation or to rely on their social network to traverse their long-time community—for those lucky enough to have family and friends nearby (Tacken, 1998; Burns, 1999; Rosenbloom, 2001). Planners aren't listening to older adults' views in most instances (Laws, 1993) while continuing to construct age-unfriendly environments (World Health Organization, 2007).

The frequency with which older adults walk is a direct correlation with successful ageing (Baltes, 1996). The walkability of the built environment is paramount in allowing older adults to actively age, given that walking allows for continued physical activity and connection with other community members (Michael, 2006). Through walking and access to public spaces, a greater sense of independence is felt and allows for greater chances of social interaction. Diers (2008) calls these "bumping places", where people informally bump into one another, which fosters community relationships while ensuring intergenerational social interactions necessary for healthy ageing occur (Wiles, 2012). In contrast to the developmental stages of youth and adulthood, which are goal and success oriented, healthy ageing is infused with a sense of meaning and purpose in life (Cole 1984; Cole and Gadow 1986; Rosenmayr 1985).

A study conducted in Baltimore, Maryland found that walking outside the home each day and traveling a minimum of two blocks on average, is enough to prevent physical mobility decline in older adults (Simonsick et al, 2005). A related study found that simply walking a mile each week was enough to slow the progression of functional limitations (Miller, 2000), while only 36.3% of older adults do so on a regular basis (Masurier et al, 2008). It would be ignorant to assume that this is due to 'inherent' reclusive traits of older adults. Barriers in the built environment such as poor access to public transit, inadequate sidewalk design and a lack of lighting are consistently reported by older adults to be major impediments in navigating their community (Markham 1998).

When correlated with older adults' mobility impairments, poor street conditions, heavy traffic and noise pollution have been shown to negatively affect mobility 1 to 3 years after initial exposure (Balfour 2002; Schootman 2006) resulting in increased risks of disability, depression and decreased quality of life (Balfour, 2002; Echeverria, 2008; Walsh, 2011; Yen, 2006). A study in Chicago found that older adults with physical mobility difficulties reported poor street conditions such as broken curbs, cracks and potholes, as the biggest barrier to walking in their neighbourhoods (Clarke, 2008). In Houston, 75% of neighbourhoods lacked curb cuts and bus shelters, leading to a mere 10% of older adults using public transit when almost half lived within two blocks of a bus stop (Markham, 1998).

Studying the effects of mixed-use neighbourhoods (Frank et al. 2008; King et al. 2001), researchers have found that increased proximity of businesses and amenities positively influences the obesity levels of residents. However, another study that focused solely on older adults was unable to find a significant correlation between density and self-rated health (McNeill et al., 2006). More research is needed to understand the built environment and the effects it has

on older adults continued mobility, across a variety of physical mobilities, given older adults experience the greatest risk of physical decline and institutionalization (Jette, 1992; Alexander, 2005). Unsurprisingly, the most affected are the financially disadvantaged given their greater need to access social services as well as,

> "Women, minority, and low-income seniors are especially vulnerable because of their greater propensity to live alone in socially and economically disadvantaged areas without the language, education, or economic resources to negotiate or even improve their environment" (Markham, 1998).

The trend in gerontological care that places an overwhelming emphasis on older adults to age-in-place, regardless of the countless limitations imposed by the built environment, shows an expectation for older adults to have close familial ties in the form of a spouse or child. Social isolation has been shown to be influenced by an older adults' place of residence, geographic distance from family and friends, access to transportation, inadequate housing or homelessness, and living alone (Hall & Havens, 1999; Havens, Hall, Sylvestre, & Jivan, 2004). More importantly, social isolation was found to be a by-product of an older adult's inability to navigate their home and community in order to carryout activities of daily life (Chappell 1989).

Social Isolation

To stress from the beginning, little is known about how social isolation affects older adults need for healthcare and the services used, especially through the lenses of gender and concerns about the built environment (Cloutier-Fisher, 2009). What has been found is that older adults who are female, low-income, a person of colour, widowed or experiencing familial conflict and ageism are most likely to experience social isolation (Bosworth, 1997; de Jong Gierveld, 1995; Locher et al., 2004; Torres et al., 1992; Wenger et al. 1996).

Social isolation experienced by older adults ageing-in-place is a critical health concern that, if unaddressed, can lead to many negative health outcomes. The concept of social isolation can be difficult to define, given that many disciplines attune it to fit within their paradigm, making researchers hesitant to draw a definitive connection between social isolation and loneliness (Victor 2009; Wenger et al., 1996). For instance, older adults with smaller social networks do not always feel lonely, while those with extensive social networks can experience loneliness regardless of the number of relationships they maintain (de Jong Gierveld, 2004; Havens, 2004). Loneliness can also be situational, such as older adults who do not experience loneliness during their daily life but do on holidays or at night (Andersson, 1998).

In this paper, social isolation is defined as "a state in which the individual lacks a sense of belonging socially, lacks engagement with others, has a minimal number of social contacts and they are deficient in fulfilling and quality relationships" (Nicholson, 2009). Using this definition allows for a clearer distinction between those who are simply enjoying solitude and those experiencing social isolation. While it is echoed that older adults' voices should be heard, an overwhelming majority of the research on social isolation is quantitative in nature and emphasize the negative aspects of social isolation (Dahlberg 2007). A few qualitative studies explore how older adults feel ashamed having limited social and familial relations (McInnis, 2001; Sand,

2006), while others attempt to find the positives by describing it as a time for creativity and introspection (Dahlberg, 2007), or the coping mechanisms that older adults adopt as a result of social isolation (Pettigrew, 2008).

To further complicate the image of social isolation, an older adult's self-reported feelings of loneliness, or the lack there of, is inadequate in determining whether they will experience social isolation in the future. Having a spouse-centred social network can be equally fulfilling in comparison to a larger social network but is inadequate in 'preparing' older adults for the eventuality of a spouse becoming disabled or dying (Pearlin, 1996; Wenger, 2004). While there is an expectation to rely on familial relationships when grieving the death of a spouse, relationship dynamics between family, and even friends, are always in a state of flux (Mullins, 1992; Victor, 2000).

Some research has shown that 'weak social ties' (Granovetter, 1973) could possibly play a larger role in mitigating the impact of major losses in small social networks. A focus on strong relationship ties, familial or friends, may be overlooking the importance of acquaintances in the personal relationships of older adults (Eve, 2002). Coining the term 'consequential strangers', Fingerman (2004) wanted to fully capture the benefits of weaker ties stating that "peripheral ties add something more to quality of life". Another benefit of these weaker social ties is the diversification of their supportive social network, allowing for greater protection against social isolation during times of hardship (Berkman, 2000).

One way that researchers have attempted to clarify these nuances is by developing methods such as the Lubben Shortened Social Network Scale or LSNS-6. While still quantitative, The LSNS-6 is a survey tool designed assess whether older adults experience social isolation by the number of social contacts and the perceived social support of interviewees. The LSNS-6 consists of six

questions that evaluate the number of relatives and friends that older adults see or hear from frequently, calls upon for help, or to discuss private matters (Lubben, 2003; Lubben et al., 2006).

Cloutier-Fisher & Kobayashi (2009), using data from the Canadian Community Health Survey, employed the LSNS-6 method, finding that 17% of the 13,679 older adults interviewed in British Columbia felt socially isolated. In the United States, it has been estimated that 43% of older adults who age-in-place experience social isolation (Nicolson, 2010; Smith, 2009), while a previous study found the highest percentages recorded, with 49% of respondents feeling lonely often (Victor, 2000), quickly illustrating how complicated measuring loneliness and social isolation can become.

From a sample of 1,064, researchers interviewed older adults who were ageing-in-place in British Columbia to determine their levels of self-reported social isolation across the province, finding that socially isolated respondents had more chronic health conditions than those who didn't report feeling socially isolated on average (Cloutier-Fisher, 2009). The Kungsholmen project found that 35% of non-demented older adults experienced social isolation (Holmen, 2000), demonstrating that a small or unsupportive social network increases the risk of poor health, both physical and mental (Bosworth, 1997; Settersten, 1999; Seeman, 1999; Wenger et al., 1996). To intensify the matter, socially isolated older adults are more likely to shun accessing to health services due to ongoing omission from social relationships (Scharf 2004; Berkman 2000). The quantitative focus on social isolation has limitations in sufficiently exploring the dynamisms of the social relationships of older adults compared to qualitative research (Delisle, 1988; Havens et al. 2004; Wenger 2004) but is helpful in exploring the myriad of ways it tangibly effects older adults.

Health Effects of Social Isolation

There is an abundance of research that focuses on the negative health outcomes as a result of social isolation. Older adults who experience chronic social isolation are at an increase for all-cause mortality (Berkman 1984; Eng 2002), defined as "the annual death rate from all causes" (Gordis 2009). Alternatively, older adults who maintain larger social networks have less instances of call-cause mortality (Giles 2005). Lacking positive reinforcement from a healthy social network, older adults can more easily ignore medical treatment and engage in unnecessary risky behaviour (Berkman 2000; Kouzis and Eaton 1998). Socially isolated older adults are more likely to drink heavily (Hanson 1994), smoke often, and live more sedentary lives (Eng 2002). It has also been found that older adults experiencing social isolation have greater risks of nutritional deficiencies (Locher 2005). Social isolation has been correlated with an increase in the number of falls (Faulkner 2003) and those experiencing social isolation are four to five times more likely to be re-hospitalized within a year of the original occurrence (Mistry 2001).

For older adults living in low-resource neighbourhoods, social support may be more important in comparison to wealthy neighbourhoods (Eschbach 2004). While caregiving through social support is a core component of ageing-in-place, it is not always in the best interest of the older adult due to inadequacies or bad relations on the part of the caregiver (Seeman 1999). A study conducted by Hall (1999) showed that a decrease in the number of people living in a household, through the death of a spouse or life transitions of children, makes older adults more likely to use home care services.

Mental health plays a cyclical role in keeping older adults socially isolated. A loneliness study conducted by Holmén et al (1992) found older adults who were cognitively impaired reported

feelings of loneliness more often than those without cognitive impairment. While Barzargen and Barbre (1992) noted that loneliness was a predictor of self-reported memory issues, Noguchi (1998) found a correlation between loneliness and the development of dementia. Fratiglioni (2000) emphasized that older adults who live alone and maintain poor social networks are 60% more likely to develop dementia in comparison to those with a healthy social network. Lehning et al., (2014) noticed a positive correlation between community engagement and self-rated health in older adults, instep with other studies that state older adults who engage in productive activities, such as volunteering, express better self-rated health (Morrow-Howell et al., 2003) and that the correlation is stronger in older adults in comparison to their younger peers (van Willigen, 2000).

With most social support for older adults coming from relatives, those without childless, widowed, divorced and single are disadvantaged (Gray, 2009). Older adults aged 85+ who had never married are more likely to live in communal care homes in contrast to those who were widowed (Focus on Older People, 2004) and living alone, for any reason, has been shown to increase the likelihood for institutional living and care (Jakobsson, 2006; Jordhøy, 2003; Lewis, 2007). Havens, (2004) found that older adults living in Manitoba with four or more chronic illnesses were at a greater risk for social isolation, up to 1.7 times more than older adults with less than four chronic illnesses (Havens 2001). Conversely, older adults who are more socially engaged report less functional disability (Mendes de Leon 2001).

Older adults who are depressed, coping with loss, socially introverted, and/or lack self esteem are more likely to experience social isolation in comparison to those who are not (Chappell 1989; Vandervoort 1999). For example, older men who have small or underutilized social networks are at higher risk of committing suicide (Eng 2002). One qualitative study investigating views of

depression by social workers had almost universal acceptance that depression was an integral cause in social isolation (McCrae et al. 2005) while another quantitative study conducted by Iliffe et al. (2007) noticed older adults who were experiencing depression, were at considerably higher risk for social isolation.

The data is unable to determine whether social isolation begets depression or vice versa, but that does not mean service providers (in the form of healthcare or more apt to this paper, city planners), cannot adequately address the glaring issues that the built environment plays in social isolation. When applying a queer intersectionality to the ageing process of older adults, the difficulties faced by the general population of older adults is at times amplified for those who identify as queer.

Queer Older Adults

> "The LGBT community has stepped up in the past to address coming out, AIDS, and civil rights. The next wave has to be aging" (Fredriksen-Goldsen et al. 2011).

Due to the resilience and advocacy of queer older adults and their allies, research regarding queer older adults has increased dramatically over the last two decades (Dobinson et al. 2005; Duncan et al. 2000; Gapka et al. 2004), inline with the reality that their existence has only recently been addressed in gerontological research (Brown, 2009; Fredriksen-Goldsen & Muraco, 2010). For example, as the population of older adults continues to rise, a greater number of those older adults will identify as queer. According to the Canadian Community Health Survey (2015), more than 3% of Canadians identify as queer. It is estimated that 2 million older adults in the United States identify as lesbian, gay or bisexual Fredriksen-Goldsen et al. (2011) while at least 400,000 Canadians are estimated to be queer older adults (Wilson et al., 2016). Canada, regarding research and population data, has "made it difficult to estimate the proportion of LGBTQ2 older adults in Canada" (Wilson & Stinchcombe 2019).

Queer older adults are unique in their experience of the life cycle in a way that is statistics are unable to capture. There is a feeling among society at large, that given the legal and cultural protections in place today, queer people, of all ages, should be okay; an end to an unjust persecution has been achieved and any remaining issues that arise are conservative dissidents, a nuisance at best. A conversation about earned acceptance overlooks the traumatic struggles that,

> "…an individual born in 1944 (aged 75 in 2019) was affected by laws that criminalized homosexuality until they were 25; their sexual orientation was seen as a mental illness until they were 35; and their rights were not protected under the Canadian Charter of

> Rights and Freedoms until they were 51; and they had no legal rights to marriage until they were aged 61. For transgender and gender diverse older adults, their gender identity and gender expression were only added to the Canadian Human Rights Act and Criminal Code protections when they were aged 72" (Wilson & Stinchcombe 2019).

Queer older adults, but also all queer persons, have to varying degrees experienced intense vulnerability, oppression, and discrimination in every facet of life including, but not limited to, employment, housing, healthcare and social support networks as a result of their identity (Brotman, Ryan, & Cormier, 2003; Donahue & McDonald, 2005; Namaste, 1999, 2009). These lived realities forced many queer older adults to live their life 'closeted', in fear of persecution or violence. Queer older adults have been labeled the "most invisible of an already invisible minority group" (Blando 2001, p. 87), making it difficult for service workers to identify or reach a worrying number of hidden queer older adults (Brotman et al., 2002; City and County of San Francisco, 2003; Porter, Russell, & Sullivan, 2003; River, 2006). When considering that queer older adults suffer from more from chronic illnesses than their heterosexual counterparts, disparities in care come to light.

A population-based study found that 44% of queer women and 38% of queer men report a disability that limits their daily activities or requires special equipment; in comparison to heterosexual women (37%) and men (34%) (Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013). Another study found that 24% of older men and 31% of older women who identify as queer reported significant limitations in basic physical activities such as walking, climbing stairs, reaching, lifting or carrying (Wallace 2011). When specifically looking at transgender older adults, the rates of adverse health outcomes is even higher compared to gay, lesbian and bisexual adults. For example, transgendered older adults have higher rates of disability (62%)

when compared against their LGB peers (46%) (Fredriksen-Goldsen, Cook-Daniels, et al., 2014). Growing concern that long-term use of unsupervised use of hormones, outside of regular medical checkups, may drastically increase the rates of age-related chronic illnesses (Witten 2012).

Older queer women are more likely to be obese and have an elevated risk of cardiovascular disease (Fredriksen-Goldsen et al., 2013), while older queer men are more likely to report hypertension and diabetes (Wallace et al., 2011). In a study conducted by the Women's Health Initiative (Valanis et al., 2000), queer older women were more likely to be obese and have higher rates of breast cancer in comparison to heterosexual women and comparing 42 pairs of lesbian-heterosexual sisters, with at least one being over the age of 50, found lesbian sisters had a higher risk of ovarian and endometrial cancer (Zaritsky, 2010). Regarding mental health, one study found that 16% of older women and 13% of older men who identified as queer reported poor mental health (Fredriksen-Goldsen et al., 2013), while another found that 22% of older queer men and 28% of older queer women reported psychological distress (Wallace et al. 2011); both rates higher in comparison to older heterosexual women (9%) and men (7%) (Fredriksen-Goldsen et al., 2013).

Many older queer adults are cognizant of their increased need for healthcare services, but there is consistent distrust of healthcare providers for fear of antigay bias or discrimination, both in the past and present (City and County of San Francisco, 2003; Heaphy, 2003; Hughes, 2005; Kirby, 1997; McFarland, 2003; Orel, 2004; River, 2006). As a result of this fear, many older queer adults frequently delay seeking support from the health and social care systems, gathering the courage to use them during times of significant distress (Brotman et al., 2003; Brown, Alley, Sarosy, Quarto, & Cook, 2001). These fears are far from an irrational paranoia. Queer people of

all ages experience discrimination in healthcare, with it being particularly concentrated in older adults **(**Cahill, 2000; Concannon, 2009; Cronin et al., 2011; D'Augelli, 2001).

In a review of 25 years of literature regarding general health, research on queer older adults is markedly missing (Fredriksen-Goldsen 2010). According to the Institute of Medicine (2011), queer older adults are one of the least understood demographics in relation to their ageing and health-related needs. The Center for Disease Control and Prevention (Center for Disease Control, 2011) states that research on sexual orientation is one of the most glaring omissions in health disparities research. While healthcare delivery in Canada is founded in universality and accessibility, queer people do not always receive the dedicated care they need (Daley, 2011). This omission of queer older adults has historically left them without adequate social (Cahill, 2000; Cantor, 2004; Dill, 2004; Gabbay 2002) or material supports (Cahill et al 2000; Cahill, 2002; Woolf, 2001). In tandem, queer older adults have been physically and socially isolated from both the queer and older-adult communities, reducing their access and awareness to services that serve both communities (Cantor et al. 2004; Cook-Daniels 1997).

Family is a complicated topic to approach for many queer older adults, as some studies have found that queer older adults have limited support or contact with their family (City and County of San Francisco, 2003; Comerford, 2004; Langley, 2001; Moore, 2002; Porter et al., 2003), others have shown a relationship with family is possibly more important than previously imagined (Heaphy et al., 2003). To further complicate the matter, research has found that around half of all queer older adults have children from previous heterosexual relationships (Landley 2001; Peacock 2000), detailing the accounts of issues that queer older adults experience with their children (Brotman et al. 2007; Heaphy et al. 2003). However, many queer older adults find themselves without the support of children, leaving many vulnerable to social isolation when

considering older adults generally receive most informal support from their children and other relatives (Turcotte & Schellenberg, 2007).

Queer older adults do not seek out homecare services with an expectation to improve their quality of life, but with a foreboding sense of loss in their ability to be themselves (Brotman et al. 2003). Although some queer older adults are 'out' to homecare providers, many have expressed concerns of needing to hide books, pictures and other queer 'paraphernalia' in their own home in order to avoid discrimination (Brotman, 2006; Orel, 2004; Stein, 2010; Zodikoff, 2006). When queer older adults do attempt to disclose their identity to health or home care providers, they are often met with "cultural blindfolds" that ignore or disregard their endeavour (Harrison 1999, p. 33).

The subsequent absence of care, from either family and friends or healthcare workers, becomes an issue when queer older adults propensity to age-in-place is similar in number to the general older adult population (Hubbard, 1995; McFarland & Sanders, 2003; National Gay and Lesbian Task Force, 2005). It can be argued that it is more important for queer older adults to age-in-place than their heterosexual peers when considering that their home has been the only space in which they could live their identities and relationships in security and safety (Brotman et al., 2003).

Informal support or nonfamily relationships is positively correlated with quality of life and has been identified as the main source of strength and resilience in queer older adults (Brown et al., 2001; Clunis, 2005). As with the general population of older adults, partners are the most desired form of support of queer adults (Butler, 1999; Heaphy et al., 2003; Van de Ven, 1997), although it is notably more important for couples who are less associated with the community and socialize predominantly with other couples (Hughes, 2005; Seabold, 1997). In the general

population, women are at greatest risk of living alone but when looking at queer older adults, queer men are more likely to live alone (38%) compared to their heterosexual peers (15%) (Fredriksen-Goldsen et al. 2011). Living alone is a key indicator for potential social isolation, which is "linked to poor mental and physical health, cognitive impairment, and premature chronic disease and death" (Cacioppo, 2003).

A mere 11% of queer older adults who receive care get that support from family (Orel, 2015), whereas family members are who heterosexual older adults receive most of their care from (Tacken, 1998; Burns, 1999; Rosenbloom, 2001). For queer older adults without meaningful relationships with friends or family, social isolation is of serious concern. Social isolation is felt more keenly in queer older adults (Heaphy et al., 2003) which is amplified for the very old (Whitford, 1997) and those with disabilities (Brotman et al., 2003; Brotman, Watkins, & Ryan, 2010; River, 2006).

In the past two decades, research in the queer community has been focused on those members who are the most active, vocal and identify themselves to both researchers and healthcare services (Orel, 2015). While these studies have increased the visibility of some members in the gay and lesbian communities, transgender and bisexual people, people of colour and immigrants, have remained notably invisible (Lee & Brotman 2011). Previous research should be analyzed carefully, and possibly dismissed, given that the overwhelming reliance on homogenous sampling groups that are predominantly White, urban, educated, middle class, able-bodied, noninstitutionalized, self-identifying gays or lesbians, who are active within their community (Orel 2004; Peacock 2000).

While self-identification is a useful mechanism in developing quantitative data about a community, queer older adults are more likely to describe themselves as "homosexual" (Rawls,

2004), “bisexual” (Rodrigeuz-Rust, 2012), or no label at all (Brotman et al., 2007) These inconsistencies call into question the practice of using middle-aged subjects (Calasanti, 2001) due to the generalizing of queer adults’ experiences of older adults, who may not self-identify solely by their sexual orientation (Boxer 1997).

Queer older adults are more likely to be concerned with their financial situations more so than anything related to their sexuality (Beeler, 1999; Jacobs, 1999; Witten, 2012), with as many as 70% saying they are not financially prepared to deal with ageing (McFarland, 2003). Few studies have been published that address the lived reality of poor and working-class queer older adults (Comerford et al., 2004; Porter et al., 2003). In order to better prepare for the ‘grey wave’, the use of intersectional analysis to determine how class, sexuality, gender, and race play significant roles in navigating the built environment as a queer older adult.

Conclusion

Keeping in mind the research question, “Do queer older adults who choose to age-in-place, in their suburban homes, perceive themselves to experience more social isolation in comparison to their heterosexual and urban peers?”, several points in the literature point to a few possible answers. As with anything, it is circumstantial.

While queer older adults are just recently being given serious consideration in the fields of healthcare and gerontology (Dobinson et al., 2005; Duncan et al., 2000; Gapka et al., 2004), these inroads should be taken simultaneously as hope and vigilance. Governments, healthcare systems and institutions are at the beginning of a global trend of societal ageing, meaning an increasing percentage of the population will be 65 years or older, placing a greater burden on these systems (Byrnes, 2006).

In order to draw a better correlation between the built environment and the possible affects of social isolation, more emphasis needs to be placed on the influence the built environment plays in our lives. Determining which models of (re)development are best suited to address the mobility needs of all people would drastically influence the way queer older adults navigate place and access the necessary care services required (Orel, 2015).

The lack of mobility options for seniors, queer, impeded their ability to adapt and thrive in their long-time suburban homes and communities. As we age, our ability to drive drops dramatically. In suburban environments the lack of walkable neighbourhoods, inadequate public transit, and overall low connectivity keep seniors in their homes. The fact that queer seniors have higher rates of poor health and mobility means they are more likely to suffer from social isolation as a result of the built environment alone. Compounded by the fact that queer older adults have less

familial ties, in the form of relatives (acceptance) or children (unable), queer older adults are left to rely on friends, of equal age~, or social services. Their reliance on social services can become an issue when providers are not educated in queer realities, forcing many to ‘re-enter’ the closet to access the vital services.

Ageing in place is touted as a means to improve the quality of life of seniors by extending the time they can spend in their homes; but without adequate community support, either socially or through the built environment, they are often forgotten and left to sit inside alone. Seniors are already an invisible minority, somewhere between fully adult and’ incapable’ child, but this is magnified in queer seniors due to the heteronormative structure of the suburbs.

This is a call for cultural competency in urban planning; demanding that planners no longer view the suburbs as a white, car-dependent, heteronormative, middle-class, reality when the present and predicted future are proving otherwise. As the suburbs become increasingly immigrant, grey and gay, these changing household dynamics will play a significant role in the way past sociological and geographical research is interpreted, possibly becoming irrelevant in the near future.

Society can no longer believe that one queer epicenter within a metropolitan area is efficient enough to provide the services needed to queer older adults. As the pressures of climate change affect our planning policies, increased densification and infill will become commonplace, especially in suburbs. Altering our pattern of the built environment will not come easily, but the benefits are overwhelming for many human concerns.

Future Research

Without encouraging the development of more qualitative studies on the lived realities of queer older adults, quantitative approaches will not appropriately respect the uniqueness and intricacies of their lives. Building from this research and convoluted methodology, it is possible to craft a research project that directly studied the effects on mobility that suburban built environment plays on queer older adults, while simultaneously collecting data on the general older adult population. By using GIS and a criterion for suburban environments that impede mobility, a largescale study could be conducted to determine whether the correlation between suburban environments and social isolation due to the built environment. To humanize the realities of these participants, a geographic variety of participants could be asked to take part in a qualitative study, allowing for a greater depth of information to accompany the statistical data.

While it is always important to humanize study participants, it is especially the case with queer older adults. Their absence from both the queer and older adult communities leaves them as an invisible minority, spending their last days alone. While there is still a long way to go in regard to dismantling homophobia within are institutions, hopefully more queer people and our allies decide that researching our lived realities is imperative to the greater understanding of society.

References

Alexander N., Goldberg A. (2005). *Common gait disturbances: a clinical overview*. Gait Disorders: Evaluation and Management, 1–18.

Alley D., Liebig P., Pynoos J., Banerjee T., and Choi I. (2007). *Creating elder-friendly communities,* Journal of Gerontological Social Work, 49(1-2): 1–18.

Andersson, L. (1998). *Loneliness research and interventions: A review of the literature*. Aging & Mental Health, 2(4): 264-274.

Baltes, M., & Carstensen, L. (1996). *The Process of Successful Ageing*. Ageing and Society, 16(4): 397-422.

Balfour J., Kaplan G. (2002). *Neighborhood environment and loss of physical function in older adults: evidence from the Alameda County Study*. American Journal of Epidemiology. 155: 507–515.

Bartley M. and O'Neill D., (2010). *Transportation and Driving in Longitudinal Studies on Ageing*. Age and Ageing, 39(5): 631–636.

Barzargen M., Barbre A. R. (1992). *Self-reported memory problems among the black elderly.*

Education Gerontology., 18(1): 71-82

Beeler, J., Rawls, T., Herdt, G., & Cohler, B. (1999). *The needs of older lesbians and gay men in Chicago*. Journal of Gay & Lesbian Social Services, 9: 31–49.

Berkman, L. F., Glass, T., Brissette, I., & Seeman, T. E. (2000). *From social integration to health: Durkheim in the new millennium*. Social Science and Medicine, 51: 843–857.

Blando, J. A. (2001). *Twice hidden: Older gay and lesbian couples, friends, and intimacy*. Generations, 25: 87–89.

Bosworth, H. B., & Warner Schaie, K. (1997). *The relationship of social environment, social networks, and health outcomes in the Seattle Longitudinal Study: Two analytical approaches*. Journal of Gerontology, Psychological Sciences, 52B: 197–205.

Boxer, A. (1997). *Gay, lesbian and bisexual aging into the twenty-first century: An overview and introduction*. Journal of Gay, Lesbian, and Bisexual Identity, 2: 187–196.

Boyd, M., & Vickers, M. (2000). *100 years of immigration in Canada*. Canadian social trends, 58(2): 2-12.

Brotman, S., Ryan, W., Collins, S., Chamberland, L., Cormier, R., Julien, D., Richard, B. (2007). *Coming out to care: Caregivers of gay and lesbian seniors in Canada.* The Gerontologist, 47: 490–503.

Brotman, S., Ryan, B., & Cormier, R. (2002). *Mental health issues of particular groups: Gay and lesbian seniors. In National Advisory Council on Aging,* Writings in gerontology: Mental health and aging, 2: 55–65. Ottawa, Canada: National Advisory Council on Aging.

Brotman, S., Ryan, B., & Cormier, R. (2003). *The health and social service needs of gay and lesbian elders and their families in Canada.* The Gerontologist, 4: 192–202.

Brotman, S., Ryan, B., & Meyer, E. (2006). *The health and social service needs of gay and lesbian elders: Final report*. McGill University School of Social Work.

Brotman, S., Watkins, J., & Ryan, B. (2010). *City of Toronto Long-Term Care Homes and Services Division: LGBT Diversity Initiative Documentation Project*. McGill University.

Brown, M. (2009). *LGBT aging and Rhetorical silence*. Sexuality Research and Social Policy Journal of NSRC, 6(4): 65-78.

Brown, L. B., Alley, G. R., Sarosy, S., Quarto, G., & Cook, T. (2001). *Gay men: Aging well!* Journal of Gay & Lesbian Social Services, 13: 41–54.

Burkhardt, J. E. (1999). *Mobility Changes: Their Nature, Effects, and Meaning for Elders Who Reduce or Cease Driving*. Transportation Research Record, 1671(1): 11–18.

Burns, P. (1999). *Navigation and the Mobility of Older Drivers, The Journals of Gerontology: Series B,* 54B (1): S49–S55.

Butler, S. S., & Hope, B. (1999). *Health and well-being for late middle-aged and old lesbians in a rural area*. Journal of Gay & Lesbian Social Services, 9: 27–46.

Byrnes, M., Lichtenberg, P. A., & Lysack, C. (2006). *Environmental press, aging in place, and residential satisfaction of urban older adults.* Journal of Applied Sociology, (2): 50-77.

Cahill, S., South, K., & Spade, J. (2000). *Outing Age: Public policy issues affecting gay, lesbian, bisexual and transgender elders.* URL: http://www.lgbthealth.net/ downloads/research/NGLTFoutingage.pdf

Calasanti, T. M., & Slevin, K. F. (2001). *Gender, social inequalities, and aging*. Walnut Creek, CA: AltaMira Press.

Cantor, M. H., Brennan, M., & Shippy, R. A. (2004). *Caregiving among older lesbian, gay, bisexual and transgender New Yorkers*. New York: National Gay and Lesbian Task Force Policy Institute.

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.

Carp, F. (1972). *Retired People as Automobile Passengers.* The Gerontologist, 12: 66-72.

Carp, F. (1988). *Significance of Mobility for the Well-Being of the Elderly*. In Special Report 218: Transportation in an Aging Society: Improving Mobility and Safety for Older Persons, Vol. II: Technical Papers. TRB, National Research Council.

Centers for Disease Control and Prevention. (2011) *CDC health disparities and inequalities report-United States*. Morbidity & Mortality Weekly Report, 2011. 60: 1-116.

Chappell N., & Badger M. (1989). *Social isolation and well-being*. Journal of Gerontology, 44: S169-S175.

City and County of San Francisco, Human Rights Commission and Aging and Adult Services Commission. (2003). *Aging in the lesbian gay bisexual transgender communities.* URL: http://www.sfgov.org/site/uploadedfiles/sfhumanrights/docs/finalreport.pdf

Clarke P., Ailshire J., Bader M., Morenoff J., House J. (2008). *Mobility disability and the urban built environment.* American Journal of Epidemiology. 168(5): 506–513.

Clarke P. & Nieuvenhuijsen R. (2009). *Environments for Healthy Ageing: A Critical Review*. Maturitas, 64: 14-19.

Cloutier-Fisher D. & Kobayashi K. (2009). *Examining social isolation by gender and geography: conceptual and operational challenges using population health data in Canada*. Gender, Place & Culture, 16(2): 181-199,

Clunis D., Fredriksen-Goldsen K. I., Freeman P. A., & Nystrom N. (2005). *Lives of lesbian elders: Looking back, looking forward*. New York, NY: Haworth Press.

Coalition for Lesbian & Gay Rights in Ontario (CLGRO). (1997). *Systems failure: a report on the experiences of sexual minorities in Ontario's health-care and social-services systems*.

Cohen, G. D. (2000). *Loneliness in Later Life*. American Journal of Geriatric Psychiatry, 8: 273- 275.

Cohen, S. and Syme, L. S. (1985). *Social Support and Health*. San Diego, CA: Academic Press.

Cole, T. (1984). *Aging, meaning, and well-being: musings of a cultural historian*. International Journal of Aging and Human Development, 19: 329-336.

Cole, T. and Gadow, S. (eds) 1986. *What Does It Mean to Grow Old?* Duke University Press, Durham.

Colcombe S, Kramer AF. (2003). *Fitness effects on the cognitive function of older adults: a meta-analytic study.* Psychology Science. 14: 125–130.

Comerford, S. A., Henson-Stroud, M. M., Sionainn, C., & Wheeler, E. (2004). *Crone songs: Voices of lesbian elders on aging in a rural environment.* Journal of Women and Social Work, 19: 418–436.

Concannon, L. (2009). *Developing inclusive health and social care policies for older LGBT citizens.* British Journal of Social Work, 39: 403–417.

Cook-Daniels, L. (1997*). Lesbian, gay male, bisexual and transgendered elders: Elder abuse and neglect issues.* Journal of Elder Abuse & Neglect, 9: 35–49.

Costa-Font, J., Elvira, D. and Mascarilla-Miro, O. (2009). *'Ageing in Place'? Exploring Elderly People's Housing Preferences in Spain.* Urban Studies, 46(2): 295-316.

Cronin, A., Ward, R., Pugh, S., King, A., & Price, E. (2011*). Categories and their consequences: Understanding and supporting the caring relationships of older lesbian, gay and bisexual people*. International Social Work, 54: 421–435.

Cutchin, M. P. (2001). *Deweyan Integration: Moving Beyond Place Attachment in Elderly Migration Theory.* The International Journal of Aging and Human Development, 52(1): 29-44.

D'Augelli, A. R., & Grossman, A. H. (2001). *Disclosure of sexual orientation, victimization, and mental health among lesbian, gay and bisexual older adults.* Journal of Interpersonal Violence, 16: 1008–1027.

Dahlberg, K. (2007). *The enigmatic phenomenon of loneliness*. International Journal of Qualitative Studies on Health and Well-being, 2(4): 195–207.

De Jong Gierveld, Jenny, and Theo G. van Tilburg. (1995). *Social relationships, integration and loneliness.* In Living arrangements and social networks of older adults, ed. C.P.M. Knipscheer, 152–72. Amsterdam: VU University Press.

De Jong Gierveld, J., Van Tilburg, T., & Dykstra, P. A. (2006). *Loneliness and social isolation.* In A. Vangelisti, & D. Perlman (Eds.), Cambridge handbook of personal relationships (pp. 485–500). Cambridge, UK: Cambridge University Press.

Debnam K, Harris J, Morris I, Parikh S, Shirey L. (2002). *Durham County socially isolated older adults: an action-oriented community diagnosis.* University of North Carolina at Chapel Hill School of Public Health, Department of Health Behavior and Health Education.

Delisle,Marc-Andre´. 1988. *What does solitude mean to the aged*? Canadian Journal on Aging 7: 339–57.

Dill, K. (2004). *Lesbian, gay, bisexual, and transgender seniors in central New York: Needs, concerns, demographics* [Survey]. Syracuse, NY: Sage Upstate.

Diers, J. (2008). *From the ground up: community's role in addressing street level social issues*. Canada West Foundation.

Dobbs, B. M. (1998). *The Older Driver: Driving and Driving Cessation Part II. Driving Cessation.* Department of Psychology, University of Alberta, Edmonton, Canada.

Dobinson C, MacDonnell J, Hampson E, Clipsham J, Chow K (2005). *Improving the access and quality of public health services for bisexuals.* Journal of Bisexuality 5(1):39-78.

Donahue, P., & McDonald, L. (2005*). Gay and lesbian aging: Current perspectives and future directions for social work practice and research*. Families in Society, 86: 359–366.

Duncan K, Clipsham J, Hampson E, Kreiger C, MacDonnell J, Roedding D, Chow K, Milne D. (2000). *Improving the Access to and Quality of Public Health Services for Lesbians and Gay men.* Toronto: Ontario Public Health Association. [http://www.opha.on.ca/our_voice/ppres/papers/2003-04_pp.pdf].

Eng, P. M., Rimm, E. B., Fitzmaurice, G., & Kawachi, I. (2002). *Social ties and change in social ties in relation to subsequent total and cause-specific mortality and coronary heart disease incidence in men*. American Journal of Epidemiology, 155: 700–709.

Eschbach, K., Ostir, G., Patel, K., Markides, K., & Goodwin, J. (2004). Neighborhood context and mortality among older Mexican Americans: Is there a barrio advantage? American Journal of Public Health, 94: 1807–1812.

Echeverria, S., Diez-Roux, A. V., Shea, S., Borrell, L. N., & Jackson, S. (2008). *Associations of neighborhood problems and neighborhood social cohesion with mental health and health behaviors: The multi-ethnic study of atherosclerosis*. Health & Place, 14: 853–865.

Eve, M. (2002). *Is friendship a sociological topic?* Archives of European Sociology, 43: 386–409.

Evenden, L. (1991). *The Expansion of Domestic Space on Vancouver's North Shore*. A Social Geography of Canada, 220-244.

Evenden, L. (1997). *Wartime housing as cultural landscape: national creation and personal creativity*. Urban History Review/Revue d'histoire urbaine, 25(2): 41-52.

Faulkner, K. A., Cauley, J. A., Zmuda, J. M., Griffin, J. M., & Nevitt, M. C. (2003). *Is social integration associated with the risk of falling in older community-dwelling women?* The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences, 58: M954–M959.

Feng J., Glass T., Curriero F., Stewart W. and Schwartz B. (2010). *The Built Environment and Obesity: A Systematic Review of the Epidemiologic Evidence.* Health and Place, 16: 175-190.

Fingerman, K. L. (2004). *The consequential stranger: Peripheral ties across the life span.* In F. Lang, & K. L. Fingerman (Eds.), Growing together: Personal relationships across the life span (pp. 183–209). New York: Cambridge University Press.

Frank, L. D., Kerr, J., Sallis, J. F., Miles, R., & Chapman, J. (2008). *A hierarchy of sociodemographic and environmental correlates of walking and obesity.* Preventive medicine, 47(2): 172-178.

Fratiglioni, L., Wang, H. X., Ericsson, K., Maytan, M., & Winblad, B. (2000). *Influence of social network on occurrence of dementia: a community-based longitudinal study.* The Lancet, 355(9212): 1315-1319.

Fredriksen-Goldsen K, Muraco A. (2010). *Aging and Sexual Orientation: A 25-Year Review of the Literature.* Research on Aging. 32(3): 372-413.

Fredriksen-Goldsen, K., Cook-Daniels, L., Kim, H., Erosheva, E., Emlet, C., Hoy-Ellis, C., Muraco, A. (2014). *Physical and mental health of transgender older adults: An at-risk and underserved population.* The Gerontologist, 54: 488–500.

Fredriksen-Goldsen, K. I., Emlet, C. A., Kim, H. J., Muraco, A., Erosheva, E. A., Goldsen, J., & Hoy-Ellis, C. P. (2013). *The physical and mental health of lesbian, gay male, and bisexual (LGB) older adults: The role of key health indicators and risk and protective factors.* The Gerontologist, 53: 664–675.

Fredriksen-Goldsen, K. I., Kim, H.-J., Barkan, S. E., Muraco, A., & Hoy-Ellis, C. P. (2013). *Health disparities among lesbian, gay male and bisexual older adults: Results from a population-based study*. American Journal of Public Health, 103: 1802–1809.

Fobker S. & Grotz R. (2006). *Everyday mobility of elderly people in different urban settings: The example of the city of Bonn, Germany*. Urban Studies, 43(1): 99-118.

Gabbay, S. G., & Wahler, J. J. (2002). *Lesbian aging: Review of a growing literature. Journal of Gay & Lesbian Social Services,* 14(3): 1–17.

Gapka S, Raj R, Chow K, Clipsham J, Hampson E, MacDonnell J. (2003). *The trans health project: Toronto*. Ontario Public Health Association. URL: [http://www.opha.on.ca/our_voice/ppres/papers/2003-06_pp.pdf]

Garvin, T., Nykiforuk, C. I., & Johnson, S. (2012). *Can we get old here? seniors' perceptions of seasonal constraints of neighbourhood-built environments in a northern, winter city*. Geografiska Annaler, Series B. Human Geography, 94(4): 369-389.

Gates, G. J. (2011). *How many people are lesbian, gay, bisexual, and transgender*? Los Angeles, CA: UCLA Williams Institute

Giles L., Glonek, G., Luszcz, M., & Andrews G. (2005). *Effect of social networks on 10-year survival in very old Australians: The Australian longitudinal study of aging. Journal of Epidemiology and Community Health*, 59: 574–579.

Glass T., & Balfour J. (2003). *Neighborhoods, aging, and functional limitations*. In I. Kawachi, & L. F. Berkman (Eds.), Neighborhoods and Health, 303–334.

Golant, S. M. (1984) *Factors influencing the locational context of old people's activities*/ Research in Aging, 6: 528–548.

Goldsen, K. I. F., Jen, S., & Muraco, A. (2019). Iridescent Life Course: LGBTQ Aging Research and Blueprint for the Future–A Systematic Review. Gerontology, 1-22.

Gordis, L. (2009). *Epidemiology* (4th Edn.). Philadelphia, Pa.: Saunders Elsevier.

Gray, A. (2009). *The social capital of older people*. Ageing & Society, 29: 5–31.

Granovetter, M. (1973). *The strength of weak ties.* American Journal of Sociology, 98: 1360–1380.

Grundy E, Mayer D, Young H and Sloggett A. (2004). *Living arrangements and place of death of older people with cancer in England and Wales: a record linkage study*. Br J Cancer, 91: 907–912.

J., Guillermina and M. Rosenzweig. 1990. *The New Chosen People: Immigrants in the United States*. New York: Russell Sage.

Hall, M., & Havens, B. (1999). *The effects of social isolation and loneliness on the health of older women.* Winnipeg, Manitoba, Canada: University of Manitoba, Prairie Women's Health Centre Excellence. http://www.pwhce.ca/effectSocialIsolation.htm

Hanson, B. S. (1994). *Social network, social support and heavy drinking in elderly men-a population study of men born in 1914*. Addiction, 89: 725–732.

Hanson, D., & Emlet, C. A. (2006). Assessing a community's elder-friendliness: A case example of the AdvantAge Initiative. Family and Community Health, 29: 266–278.

Harris, C. D. (1943). *A functional classification of cities in the United States.* Geographical Review, 33(1): 86-99.

Harrison, J. (1999). *A lavender pink grey power: Gay and lesbian gerontology in Australia.* Australasian Journal on Ageing, 18: 32–37.

Havens, B., & Hall, M. (2001). Social isolation, loneliness, and the health of older adults in Manitoba, Canada. Indian Journal of Gerontology, 1: 126–144.

Havens, B., Hall, M., Sylvestre, G., & Tyler, J. (2004). *Social isolation and loneliness: Differences between older rural and urban Manitobans.* Canadian Journal on Aging, 23: 129–140.

Hayden, D. (2004). *Building suburbia: Green fields and urban growth, 1820-2000.*

Healthy Aging and Wellness Working Group, Healthy Aging in Canada: A New Vision, A Vital Investment. From Evidence to Action: A Background Paper for the Federal, Provincial and Territorial Committee of Officials (Seniors) (Ottawa: Government of Canada, July 2006), http://www.health.gov.bc.ca/library/publications/year/2006/Healthy_Aging_A_Vital_latest_copy_October_2006.pdf.

Heaphy, B., Yip, A., & Thompson, D. (2003). *Lesbian, gay and bisexual lives over 50: A report on the project "The Social and Policy Implications of Non-heterosexual Ageing."* Nottingham, England: York House. URL: http://ess.ntu.ac.uk/heaphy/LGB50+.doc

Holmen, K., Ericsson, K., & Winblad, B. (2000). *Social and emotional loneliness among non-demented and demented elderly people.* Archives of Gerontology and Geriatrics, 31(3): 177–192.

Howden-Chapman, P., Signal, L., & Crane, J. (1999). *Housing and health in older people: Ageing in place.* Social Policy Journal of New Zealand, 13: 14–30.

Horgas, A., Wilms, H.-U. and Baltes, M. (1998) *Daily life in very old age: everyday activities as expression of succesful living.* The Gerontologist, 38: 556–568.

Hubbard, R., & Rossington, J. (1995). *As we grow older: A study of the housing and support needs of older lesbians and gay men*. Polari Housing Association.

Hughes, M. (2005). Sexual identity in health & aged care: Narrative research in the Blue Mountains. URL: http://www.rainbowvisions.org.au/resources/SexualIdentityInHealthAndAgedCare.pdf

Iliffe, S., Kharicha, K., Harari, D., Swift, C., Gillmann, G., & Stuck, A. E. (2007*). Health risk appraisal in older people 2: the implications for clinicians and commissioners of social isolation risk in older people.* British Journal of General Practice, 57(537): 277-282.

Institute of Medicine. (2011). *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding*. Washington, DC: The National Academies Press.

Jacobs, R. J., Rasmussen, L. A., & Hohman, M. M. (1999). *The social support needs of older lesbians, gay men, and bisexuals.* Journal of Gay & Lesbian Social Services, 9: 1–30.

Jakobsson E, Johnsson T, Persson L-O and Gaston-Johansson F. (2006). *End-of-life in a Swedish population: demographics, social conditions and characteristics of places of death*. Scandinavian Journal of Caring Sciences 20: 10–17.

Jasso, G., & Rosenzweig, M. R. (1990). *The new chosen people: Immigrants in the United States.* Russell Sage Foundation.

Jette, A., Branch L., Sleeper, L., Feldman, H., Sullivan, L. (1992*). High-risk profiles for nursing home admission.* Gerontologist. 32: 634–640.

Jordhøy M., Saltvedt I., Fayers P, Loge JH, Ahlner-Elmkvist M and Kaasa S. (2003). *Which patients die in nursing homes? Quality of life, medical and sociodemographic characteristics*. Palliat Med 17: 433–444.

Kelly, B. M. (1993). *Expanding the American dream: Building and rebuilding Levittown*. SUNY Press.

King, A. (2001). *Interventions to Promote Physical Activity by Older Adults*, The Journals of Gerontology: Series A, 56(2): 36–46

Kirby, S. L. (1997). *A report on the needs assessment survey of senior gays and lesbians.* Winnipeg, MB: Sum Quod Sum Foundation.

Kobayashi, K. M., Cloutier-Fisher, D., & Roth, M. (2009). *Making meaningful connections: A profile of social isolation and health among older adults in small town and small city*, British Columbia. Journal of Aging and Health, 21(2): 374–397.

Kouzis, Anthony C., and William W. Eaton. (1998). *Absence of social networks, social support and health services utilization.* Psychological Medicine 28: 301–10.

Langley, J. (2001*). Developing anti-oppressive empowering social work practice with older lesbian women and gay men*. British Journal of Social Work, 31: 917–932.

Laws, G. (1994). *Implications of demographic changes for urban policy and planning*. Urban Geography, 15(1): 90-100.

Le Masurier G., Bauman A., Corbin C., Konopack J., Umstattd R., Van Emmerik R.E.A. (2008). *Assessing walking behaviors of selected subpopulations*. Medical Science in Sports & Exercise. 40(7): S594–S602.

Lee, E. O. J., & Brotman, S. (2011). *Identity, refugeeness, belonging: Experiences of sexual minority refugees in Canada.* Canadian Review of Sociology/Revue canadienne de sociologie, 48(3): 241-274.

Lehning, A. J., Smith, R. J., & Dunkle, R. E. (2014). *Age-Friendly Environments and Self-Rated Health: An Exploration of Detroit Elders*. Research on Aging, 36(1): 72–94.

Lewis G. (2007*). Predicting who will need costly care: How best to target preventive health, housing and social programmes*. London: Kings Fund.

Liu C., Everingham J., Warburton J., Cuthill M. and Bartlett H. (2009). What Makes a Community Age-friendly: A Review of International Literature. Australasian Journal on Ageing, 28(3): 116-121

Locher, J. L., Ritchie, C. S., Roth, D. L., Baker, P. S., Bodner, E. V., & Allman, R. M. (2004). *Social isolation, support, and capital and nutritional risk in an older sample: Ethnic and gender differences*. Social Science and Medicine, 60: 747–761.

Lubben, J., & Gironda, M. W. (2003). *Centrality of social ties to the health and well-being of older adults*. In B. Berkman, & L. K. Harooytan (Eds.), Social work and health care in an aging world (pp. 319–350). New York: Springer.

Lubben, J. E., Blozik, E., Gillmann, G., Iliffe, S., Kruse, W. R., Beck, J. C., et al. (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.

Markham J., Gilderbloom J. (1998*). Housing quality among the elderly: a decade of changes.* International Journal of Aging Human Development. 46(1): 71–90.

McCrae, N., Murray, J., Banerjee, S., Huxley, P., Bhugra, D., Tylee, A., et al. (2005). *'They're all depressed, aren't they?' A qualitative study of social care workers and depression in older adults.* Aging & Mental Health, 9: 508–516.

McFarland, P. L., & Sanders, S. (2003). *A pilot study about the needs of older gays and lesbians: What social workers need to know.* Journal of Gerontological Social Work, 40: 67–80.

McInnis, G. J., & White, J. H. (2001). *A phenomenological exploration of loneliness in the older adult*. Archives of Psychiatric Nursing, 15(3): 128–139.

McNairnay, E. and Garvin, T. (2011): *Can we grow old here? Aging in Edmonton's new suburbs*, paper presented at the Association of American Geographers Annual Meeting, Seattle, WA, 12-19.

McNeill, L. H., Kreuter, M. W., & Subramanian, S. V. (2006). Social environment and physical activity: a review of concepts and evidence. Social science & medicine, 63(4): 1011-1022.

McManus, R., & Ethington, P. J. (2007). *Suburbs in transition: new approaches to suburban history*. Urban History, 34(2): 317-337.

Mendes de Leon, C. F., Glass, T. A., Beckett, L. A., Seeman, T. E., Evans, D. A., & Berkman, L. F. (1999). *Social networks and disability transitions across eight intervals of yearly data in the new haven EPESE*. The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences, 54: S162—S172.

Y. Michael, M. Green, and S. Farquhar. (2006). *Neighborhood design and active aging*. Health & Place, 12(4): 734–740.

Miller ME, Rejeski WJ, Reboussin BA, Ten Have TR, Ettinger WH. (2000). Physical activity, functional limitations, and disability in older adults. Journal of the American Geriatric Society. 48: 1264–1272.

Miller, G. (2017). *No Place to Grow Old: How Canadian Suburbs Can Become Age-Friendly*. Institute for Research on Public Policy.

Mistry, R., Rosansky, J., McGuire, J., McDermott, C., Jarvik, L., & UPBEAT Collaborative Group. (2001). *Social isolation predicts re-hospitalization in a group of older American veterans enrolled in the UPBEAT program: Unified psychogeriatric biopsychosocial evaluation and treatment.* International Journal of Geriatric Psychiatry, 16: 950–959.

Moore, W. R. (2002). *Lesbian and gay elders: Connecting care providers through a telephone support group.* Journal of Gay & Lesbian Social Services, 14: 23–41.

Moos, M. and Kramer, A. (2012): Atlas of Suburbanisms.
URL: http://envblogs.uwaterloo.ca/atlas/

Morrow-Howell, N., Hinterlong, J., Rozario, P. A., & Tang, F. (2003). *Effects of volunteering on the well-being of older adults*. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 58(3): S137-S145.

Mullins, L. C., & Mushel, M. (1992). *The existence and emotional closeness of relationships with children, friends and spouses: the effect on loneliness among older persons.* Research on Aging, 14: 448–470.

Namaste, V. (1999). The use and abuse of queer tropes: Metaphor and catachresis in queer theory and politics. Social Semiotics, 9: 213-234.

Namaste, V. (2009). *Undoing theory: The "transgender question" and the epistemic violence of Anglo-American feminist theory*. Hypatia, 24: 11–32.

Nicholson, N. (2009). *Social isolation in older adults: An evolutionary concept analysis*. Journal of Advanced Nursing, 65: 1342–1352.

Nicholson, N.,Molony, S., Fennie, K., Shellman, J.,& McCorkle, R. (2010). *Predictors of social isolation in community living older persons.* Yale University, New Haven, CT.

Noguchi, F., Nakashima, Y., & Morimoto, Y. (1998). *Loneliness and dementia in the elderly living in the home.* Journal-Kurume Medical Association, 61: 123-132.

Office for National Statistics. Focus on Older People. London: The Stationery Office, 2004.

Office for National Statistics. General Household Survey (2007). London: The Stationery Office.

Ontario Ministry of Municipal Affairs and Housing, Research and Special Projects Branch, Towards Community Planning, p. 10.

Ontario Ministry of Municipal Affairs and Housing, Research and Special Projects Branch. (1983). Towards Community Planning for an Aging Society. (Toronto: Research and Special Projects Branch.)

Orel, N. A. (2004). *Gay, lesbian, and bisexual elders: Expressed needs and concerns across focus groups*. Journal of Gerontological Social Work, 43: 57–77.

Orel, Nancy A. & Fruhauf, Christine A. (2015). *The lives of LGBT older adults: Understanding challenges and resilience.* Washington, DC, US: American Psychological Association.

Oswald, F., Jopp, D., Rott, C., & Wahl, H. (2010). *Is aging in place a resource for or risk to life satisfaction?* The Gerontologist, 51: 238–250.

Paez, A., Scott, D., Potoglou, D., Kanaroglou, P., & Newbold, K. B. (2007). *Elderly Mobility: Demographic and Spatial Analysis of Trip Making in the Hamilton CMA, Canada.* Urban Studies, 44(1): 123–146.

Peacock, J. R. (2000). *Gay male development: Some stage issues of an older cohort*. Journal of Homosexuality, 40: 13–29.

Pearlin, L. I., & Skaff, M. M. (1996). *Stress and the life course: A paradigmatic alliance*. The Gerontologist, 36(2): 239–247.

Pettigrew, S., & Roberts, M. (2008). *Addressing loneliness in later life*. Aging and Mental Health, 12(3): 302–309.

Porter, M., Russell, C., & Sullivan, G. (2003). *Gay, old, and poor: Service delivery to aging gay men in inner city Sydney, Australia*. Journal of Gay & Lesbian Social Services, 16: 43–57.

Rawls, T. W. (2004). *Disclosure and depression among older gay and homosexual men: Findings from the Urban men's health study.* In G. Herdt & B. de Vries (Eds.), Gay and lesbian aging: Research and future directions (pp. 117–142). New York, NY: Springer.

River, L. (2006). *A feasibility study of the needs of older lesbians in Camden and surrounding boroughs.* Report to Age Concern Camden. http://www.ageofdiversity.org.uk/sites/default/files/OlderLesbianReport.pdf

Rogers, C. (1959). *A Theory of Therapy, Personality and Interpersonal Relationships as Developed in the Client-centered Framework.* In (ed.) S. Koch, Psychology: A study of a science. Vol. 3: Formulations of the person and the social context. New York: McGraw Hill.

Rodriguez-Rust, P. C. (2012). *Aging in the bisexual community*. In T. M. Witten & A. E. Eyler (Eds.), Gay, lesbian, bisexual and transgender aging (pp. 162–186). Baltimore, MD: Johns Hopkins University Press.

Rothe, P. J. *Beyond Traffic Safety.* Transaction Publishers, New Brunswick and London, Canada, 1994.

Rosenbloom, S. (2001). *Sustainability and Automobility Among the Elderly: An International Assessment.* Transportation, 28(4): 375-408.

Rosenbloom, S. (2003) *The mobility needs of older Americans: Implications for transportation reauthorization*, http://www.brookings.edu/reports/2003/07transportation rosenbloom.aspx.

Rosenmayr, L. (1985). *Changing values and positions of aging in Western culture*. In Birren, J. E. and Schaie, K. W. (eds) Handbook of the Psychology of Aging. Van Nostrand Reinhold, New York, 190-215.

Sand, L., & Strang, P. (2006). *Existential loneliness in a palliative home care setting*. Journal of Palliative Medicine, 9(6): 1376–1387.

Scharf, T., & Smith, A. E. (2004). *Older people in urban neighbourhoods: Addressing the risk of social exclusion in later life.* In C. Phillipson, G. Allan, & D. Morgan (Eds.), Social networks and social exclusion: Sociological and policy perspectives (pp. 162–179). Burlington, VT: Ashgate.

Scharlach, A. E., & Lehning, A. J. (2013). *Ageing friendly communities and social inclusion in the United States.* Ageing & Society, 33: 110–136.

Schootman M, Andresen EM, Wolinsky FD, Malmstron TK, Miller JP, Miller DK (2006). *Neighborhood conditions and risk of incident lower-body functional limitations among middle-aged African Americans*. American Journal of Epidemiology, 163: 450–458.

SCHWANEN, T., DIJST, M. and DIELEMAN, F. (2001) Leisure trips of senior citizens: determinants of modal choice, Tijdschrift voor Economische en Sociale Geografie, 92: 347–360.

Seabold, G. (1997). *Surviving a partner's death deeply in the closet.* Journal of Gay & Lesbian Social Services, 7: 7–14.

Seeman, T. (1999). *Health promoting effects of family and friends on health outcomes in older adults.* American Journal of Health Promotion, 14: 362–370.

Settersten, R. A. (1999). *Lives in time and place: The problems and promises of developmental science.* Amityville, NY: Baywood Publishing Co.

Simonsick E., Guralnik J., Volpato S., Balfour J., Fried L. (2005) *Just get out the door! Importance of walking outside the home for maintaining mobility: findings from the Women's Health and Aging Study.* Journal of the American Geriatric Society. 2005; 53(2): 198–203.

Sixsmith, A. and Sixsmith, J. (2008). *Ageing in Place in the United Kingdom*. Ageing International, 32(3): 219-235.

Smith, T. F., & Hirdes, J. P. (2009). *Predicting social isolation among geriatric psychiatry patients.* International Psychogeriatrics, 21: 50–59.

Smith G., & Sylvestre G. (2001). *Determinants of the travel behavior of the suburban elderly*. Growth and Change, 32(3): 395-412.

Sorkin, D., Rook, K. and Lu, J. (2002). *Loneliness, Lack of Emotional Support, Lack of Companionship, and the Likelihood of Having a Heart Condition in an Elderly Sample*. Annals of Behavioral Medicine, 24, 290-298.

Statistics Canada (2015). Disability in Canada: Initial Findings from the Canadian Survey on Disability. Canadian Survey on Disability 2012 (89-654-X). Ottawa, Ontario. http://www.statcan.gc.ca/pub/89-654-x/89-654-x2013002-eng.htm

Statistics Canada (2013). Population Projections for Canada 2013 to 2063. Population Projections for Canada, Provinces and Territories (91-520-X). Ottawa, Ont. http://www.statcan.gc.ca/pub/91-520-x/91-520-x2014001-eng.htm

Stein, G. L., & Beckerman, N. L. (2010). *Lesbian and gay elders and long-term care: Identifying the unique psychosocial perspectives and challenges.* Journal of Gerontological Social Work, 53: 421–435.

Sturm, R., & Cohen, D. A. (2004). *Suburban sprawl and physical and mental health*. Public health, 118(7): 488-496.

Tacken, M. (1998). *Mobility of the Elderly in Time and Space in the Netherlands: An Analysis of the Dutch National Travel Survey*. Transportation, 25(4): 379-393.

Takano T., Nakamura K., Watanabe M. (2002). *Urban residential environments and senior citizens' longevity in megacity areas: the importance of walkable green spaces.* Journal of Epidemiology & Community Health, 56: 913-918.

Tinker, A. (2002). *The social implications of an ageing population*. Mechanisms of Ageing and Development, 123(7): 729-735.

Torres, C., McIntosh, W., and Kubena, K. (1992). *Social network and social background characteristics of elderly who live and eat alone.* Journal of Aging and Health 4: 564–78.

Turcotte, M., & Schellenberg, G. (2007). *A portrait of seniors in Canada: 2006*. Ottawa: Statistics Canada. Retrieved from http://www.statcan.ca/english/freepub/89-519-XIE/89-519-XIE2006001.pdf

U.S. Environmental Protection Agency Aging Initiative. (2011). *Building healthy communities for active aging national recognition program.* http://www.epa.gov/agingepa/bhc/about.htm

United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Ageing 2015 (ST/ESA/SER.A/390). http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf

Valanis, B. G., Bowen, D. J., Bassford, T., Whitlock, E., Charney, P., & Carter, R. A. (2000). *Sexual orientation and health: Comparisons in the Women's Health Initiative sample.* Archives of Family Medicine, 9, 843–853.

Van de Ven, P., Rodden, P., Crawford, J., & Kippax, S. (1997). *A comparative demo-graphic and sexual profile of older homosexually active men.* Journal of Sex Research, 34: 349–360.

Van Willigen, M. (2000). *Differential benefits of volunteering across the life course.* Journals of Gerontology: Social Sciences, 55: S308–S318.

Vandervoort, Debra. 1999. *Quality of social support in mental and physical health.* Current Psychology 18: 205–20.

Victor, C., Scambler, S., Bond, J., & Bowling, A. (2000*). Being alone in later life: Loneliness, social isolation and living alone.* Reviews in Clinical Gerontology, 10: 407–417.

Victor, C., Scambler, S., & Bond, J. (2009). *The social world of older people: Understanding loneliness and social isolation in later life.* Maidenhead, UK: Open University Press/McGraw Hill Education.

Wahl, H-W, & Weisman, G. (2003*). Environmental gerontology at the beginning of the new millennium: Reflections on its historical, empirical, and theoretical development.* The Gerontologist, 43: 616–627.

Wallace, S. P., Cochran, S. D., Durazo, E. M., & Ford, C. L. (2011). *The health of aging lesbian, gay and bisexual adults in California.* Los Angeles, CA: UCLA Center for Health Policy Research.

Walker A., (2002). *A Strategy for Active Ageing*. International Social Security Review, 55(1): 121–139.

Walsh, K., & Gannon, B. (2011). *Perceived neighbourhood context, disability onset and old age.* The Journal of Socioeconomics, 40: 631–636.

Wenger, G. C., Burholt, V., & Scott, A. (2001). *The ageing process: The Bangor Longitudinal Study of Ageing 1979–1999.* Bangor, Gwynedd: Centre for Social Policy Research and Development, Institute of Medical and Social Care, University of Wales.

Wenger, G. Clare, Richard Davies, Said Shahtahmasebi, and Anne Scott. 1996. *Social isolation and loneliness in old age: Review and model refinement*. Ageing and Society 16: 333–58.

Wenger, G. Clare, and Vanessa Burholt. 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, no. 2: 115–27.*

Whitehand, J. W. (1994). Geography, 3-17.

Whitford, G. S. (1997). *Realities and hopes for older gay males.* Journal of Gay & Lesbian Social Services, 6, 79–95

Wiles J., Leibing A., Guberman N., Reeve J., Allen R. (2012). *The Meaning of "Aging in Place" to Older People*. The Gerontologist, 52(3): 357–366.

Wilson, K., Stinchcombe, A., Kortes-Miller, K., & Enright, J. (2016*). Support needs of lesbian, gay, bisexual, and transgender older adults in the health and social environment*. Counseling et spiritualité/Counselling and Spirituality, 35(1): 13-29.

Wilson, K., & Stinchcombe, A. (2019). *Policy legacies and forgotten histories: Health impacts on LGBTQ2 older adults.*

Witten, T. M. (2012). *The aging of sexual and gender minority persons: An overview.* In T. M. Witten & A. E. Eyler (Eds.), Gay, lesbian, bisexual and transgender aging: Challenges in research, practice and policy (pp. 1–58). New York, NY: Johns Hopkins University Press.

Woolf, L. M. (2001). *Gay and lesbian aging*. SIECUS Report: Sexuality and Aging Revisited, 30(2): 16–21.

World Health Organization. (2002). Active Ageing: A Policy Framework. World Health Organization, Geneva, Switzerland.

World Health Organization (2007). Global Age-Friendly Cities: A Guide. World Health Organization, Geneva, Switzerland.

Yen, I., Yelin, E., Katz, P., Eisner, M., & Blanc, P. (2006). *Perceived neighborhood problems and quality of life, physical functioning, and depressive symptoms among adults with asthma.* American Journal of Public Health, 96, 873–879.

Zaritsky, E., & Dibble, S. L. (2010). *Risk factors for reproductive and breast cancers among older lesbians*. Journal of Women's Health, 19: 125–131.

Zodikoff, B. D. (2006). *Services for lesbian, gay, bisexual and transgender older adults*. In B. Berkman (Ed.), Handbook of social work in health and aging (pp. 569–576). New York, NY: Oxford University Press.