

**Investigating the Impact of Green Spaces on the Well-being of Older Chinese  
Immigrants**

by

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B.Eng., Urban and Rural Planning, Beijing Forestry University, 2023

A Thesis Submitted in Partial Fulfillment  
of the Requirements for the Degree of

MASTER OF SCIENCE

in the School of Social Dimensions of Health  
in the Department of Public Health and Social Policy

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University of Victoria

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We acknowledge and respect the Lək̓ʷəŋən (Songhees and X̱wsep̓səm/Esquimalt) Peoples on whose territory the university stands, and the Lək̓ʷəŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day.

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## Abstract

This thesis investigates the critical role that urban green spaces play in shaping the physical, mental, and social well-being of older Chinese immigrants in Victoria, British Columbia. Utilizing a qualitative approach anchored in semi-structured interviews with 16 Mandarin-speaking older Chinese immigrants, this study explores how their experiences and perceptions of green spaces are shaped by intersecting factors such as cultural practices, language barriers, gender roles, transportation accessibility, and urban infrastructure. Findings reveal that green spaces significantly contribute to participants' overall health and quality of life, serving as essential venues for physical exercise, mental relaxation, cultural continuity, and intergenerational bonding.

However, the study identifies substantial barriers—including inadequate public transportation, language proficiency issues, safety concerns, limited culturally relevant programming, and age-inappropriate infrastructure—that restrict equitable access and meaningful participation. The thesis provides targeted policy recommendations aimed at municipal planners and decision-makers to enhance inclusivity for older Chinese immigrants in urban green spaces. These include improving transportation networks, providing multilingual signage and culturally sensitive programming, implementing age-friendly park designs, supporting urban gardening initiatives, and fostering intergenerational integration through community-driven programs.

By highlighting the unique challenges and opportunities experienced by older Chinese immigrants, this research contributes valuable insights into how culturally inclusive green spaces can promote health equity, social inclusion, and community resilience in diverse urban settings.

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## Acknowledgements

Time flies, two years are almost gone.

First, I would like to thank my dear supervisor, Denise, for pulling me out of the quagmire when I was at my lowest point in life. I would like to thank my co-supervisor, Fred and committee member, Reuben, without your supervision and support, I think I would not have been able to successfully complete this research and my graduate career. I also would like to specifically acknowledge the national, SSHRC-funded, Inclusive Communities for Older Immigrants project, led by Dr. Sepali Guruge for supporting my work as a research assistant, and my introduction into some of the organizations and individuals who participated in this larger project.

Second, I would like to thank my mother and father, especially my mother, who has given me strength and has been a beacon for me to move forward firmly throughout my life. I miss you two so much. I hope that everything goes well for those who love me and those I love, and that their wishes come true, and that we can be happy, joyful and healthy every day.

As a first-generation Chinese immigrant and student, this research journey has been both scholarly and deeply personal. I approached this work as an insider-researcher, drawing from shared language, cultural memory, and lived experience to centre the voices of a community often marginalized in public discourse. The findings reaffirm the critical role that green spaces play in fostering not only physical health but also a sense of home, community, and dignity in later life.

In reimagining green spaces as places of cultural inclusion, social justice, and collective well-being, I hope this work contributes to a broader shift toward cities that truly welcome and support aging immigrants. By listening to their stories and valuing their insights—including the diverse ways older men and women experience urban life—we

take one step closer to building urban environments that are not only greener—but also more just, more compassionate, and more human.

## Chapter 1: Introduction

In Canada, older Chinese immigrants are one of the most rapidly increasing minority groups (Statistics Canada, 2021), yet their unique health challenges are often overlooked in public health and urban planning (Lin, 2022). Many older Chinese immigrants experience intersecting vulnerabilities, including social isolation (Dong et al., 2012; Lai & Chau, 2007), language barriers (Li et al., 2018), discrimination related to the ‘model minority’ stereotype (Lee & Holm, 2011), reduced mobility (Kuo, Chong, & Joseph, 2008), and limited access to culturally relevant resources, such as healthcare and recreational facilities that align with cultural needs (Ferrer, 2015; Kang, Domanski, & Moon, 2009; Koehn et al., 2013).

In recent years, green spaces have been recognized as a significant factor in promoting the physical, mental, and social well-being of older adults (Douglas et al., 2017). Research suggests that access to green spaces can reduce sedentary behaviour, alleviate stress, and foster social interactions, which are critical for healthy aging (De Keijzer et al., 2020; Wen et al., 2018). However, the specific experiences of older Chinese immigrants regarding green spaces and their potential to improve well-being remain underexplored (Brotman, 2003a; Ferrer, 2017; Forbat, 2004).

### 1.1 Conceptualizing Green Spaces in a Social Determinants of Health Framework

The Social Determinants of Health (SDH) framework recognizes that health and well-being are profoundly influenced by social, economic, cultural, and environmental determinants (Gold, 1993; Salma et al., 2018; Tapsell et al., 2002). These determinants encompass the conditions in which people are born, grow, work, live, and age, as well as the broader set of forces and systems shaping daily life (Braveman & Williams, 2011). For instance, the World Health Organization (WHO, 2021) emphasizes that social

determinants of health are non-medical factors influencing health outcomes, including economic policies, social norms, and political systems. Similarly, the Centres for Disease Control and Prevention (CDC, 2022) and the Pan American Health Organization (PAHO, 2023) highlight that social determinants of health are conditions in various environments—such as where people live, learn, and work—that affect health, functioning and quality-of-life outcomes. These dimensions include social support networks, cultural identity, access to resources, and environmental contexts (Braveman & Gottlieb, 2014; Raphael, 2006; Marmot & Wilkinson, 2005; Marmot et al., 2008).

To ground this research, it is important to define one key concept: well-being first. In this research, ‘well-being’ is understood as a multidimensional concept that encompasses not only physical and mental health but also social inclusion, emotional fulfillment, and a sense of purpose in life (Crisp, 2017; Martela & Scheldon, 2019; Keyes & Waterman, 2003; Kiefer, 2008; Topp, 2015). This broader perspective goes beyond mere happiness or subjective pleasure and instead aligns with holistic frameworks of well-being, particularly relevant to aging and migration contexts (Gao et al., 2021). For older immigrants, well-being often includes additional elements such as cultural continuity, community belonging, and access to meaningful spaces (Amit & Litwin, 2010).

Older Chinese immigrants often experience unique challenges due to their immigration status, cultural differences, and aging-related factors. Many older immigrants face cultural dislocation, which can impact their sense of belonging and overall well-being (Wong et al., 2018). Cultural dislocation refers to the psychological, emotional, and social disconnection individuals experience when they are removed from or lose touch with their familiar cultural environment (Berry, 2001; Bhugra & Becker, 2005; Rapport & Dawson, 1998; Said, 1994). They also experience social isolation due to language barriers, limited social networks, and mobility issues (Wen Li et al., 2010). Accessible and culturally

relevant green spaces, which are designed to reflect and accommodate the cultural values, traditions, and needs of diverse communities (Byrne & Wolch, 2009; Lo & Jim, 2010; Peters et al., 2010), foster community engagement and social interaction, serving as inclusive environments that promote social connection and cultural expression (Mass et al., 2006).

Green spaces play a vital role in promoting the well-being of older Chinese immigrants across multiple dimensions. In this context, green space refers to areas of vegetation in urban or suburban environments that support physical activity, social interaction, and environmental restoration (Jorgensen & Gobster, 2010; Neuvonen et al., 2007; Swanwick et al., 2003; Van Den Berg et al., 2010). These may include formal parks (e.g., Beacon Hill Park in Victoria), gardens (e.g., Butchart Garden in Victoria), neighborhood pocket parks, natural trails, community gardens, and green areas adjacent to recreational centres or residential buildings (Lee & Maheswaran, 2011; Wolch et al., 2014). Physically, green space encourages active lifestyles and a reduction in sedentary behaviour, with culturally relevant features such as walking paths, Tai Chi zones, and gardens enhancing accessibility and usability (Bedimo-Rung et al., 2005). Mentally and emotionally, exposure to green spaces alleviates stress and improves mood, with these benefits further amplified when spaces incorporate familiar cultural elements that evoke a sense of home and identity (Kaplan, & Kaplan, 1989; Ulrich et al., 1991). Socially, green spaces foster interaction and a sense of community, helping to mitigate feelings of isolation, particularly for older immigrants who rely on informal networks for support (Peters et al., 2010).

Culturally, spaces that integrate Chinese-style pavilions for gathering, traditional plants, or community festivals serve as inclusive environments that celebrate cultural heritage and reinforce identity (Liu et al., 2019). However, many older Chinese

immigrants, often constrained by socioeconomic factors, reside in urban areas with limited access to high-quality green spaces, highlighting the need for equitable urban planning that aligns with broader goals of environmental justice and health equity, which are crucial because these frameworks address the systemic disparities in urban planning, resource distribution, and health outcomes that disproportionately affect marginalized communities (Agyeman et al., 2003; Hartig et al., 2014; Jennings et al., 2016; Wolch et al., 2014).

## **1.2 Research Objectives and Questions**

This study fills a gap in research on urban green space by exploring the perceptions and experiences of green space among older Chinese immigrants in Victoria, BC. As noted previously, for the purposes of this study, well-being is understood as a holistic concept encompassing physical, mental, emotional, and social dimensions (Crisp, 2017; Topp, 2015). The information gained from this study is meant to offer municipal administrators ideas for building more diverse and inclusive older immigrant-friendly cities and communities.

### ***1.2.1 Research Objectives***

This study investigates how older Chinese immigrants in Canada engage with urban green spaces and how these interactions influence their physical, mental, and social well-being. Situated within a Canadian multicultural context, the research examines the intersection of aging, immigration, and access to nature, with attention on how Chinese cultural values, beliefs, and migration histories shape these experiences.

The central objective is to explore the lived experiences of older Chinese immigrants in relation to urban green spaces, identifying the barriers, meanings, and outcomes associated with their use. This study also seeks to understand how social exclusion — often framed as cultural incompatibility or lack of fit — manifests in more

subtle ways for Chinese immigrants, including through language barriers, collectivist family norms, and political assumptions (Stanley, 2024; Wang et al., 2012).

According to Statistics Canada (2023), Chinese Canadians frequently report discrimination based on race or skin colour (22%), ethnicity or culture (17%), and language (11%). These findings point to the layered and often invisible forms of exclusion that may impact their access to and engagement with community environments, including green spaces.

Ultimately, this research aims to inform municipal policy by amplifying the voices of older Chinese immigrants, supporting the development of age-friendly, inclusive urban environments that recognize cultural diversity in public health and city planning. The study's findings will offer grounded, community-informed recommendations for improving green space planning and access for aging immigrant populations.

### ***1.2.2 Research Questions***

To better understand the role of green spaces in supporting the well-being of older Chinese immigrants in Canada, this study explores individual interactions and experiences within community environments. The following questions guide the research:

(1) How do older Chinese immigrants use, experience, and ascribe meaning to green spaces?

(2) What municipal policy recommendations emerge from this research regarding access to green spaces and their potential role in supporting inclusive communities and the well-being of older Chinese immigrants?

### **1.3 Research Significance**

Few studies have examined how minority groups use or don't use green spaces and their value in promoting wellbeing among immigrant groups (e.g., Benton-Short et al.,

2021; Byrne et al., 2010; Charles-Rodriguez et al., 2023; Edge et al., 2023; Hordyk et al., 2015; Rigolon, 2022). In addition, green spaces hold different meanings and serve various functions for people with diverse cultural and ethno-racial backgrounds (Egerer et al., 2019). These studies demonstrate that people from different cultural backgrounds exhibit varying preferences for and engagement with green spaces (Home et al., 2010; Özgüner, 2011). For example, Byrne and Wolch (2009) found that in the United States, Asians favour park visits with extended family or organized groups, but also visit parks to exercise. White Americans often seek opportunities to exercise in green spaces, while Latinos use these areas primarily for socializing. In Australia, older Chinese immigrants reported that their main destinations were parks, natural areas, and gardens, which represent one of their primary activity patterns (Gao et al., 2022).

At the meantime, little empirical research in Canada has explored how culture and cultural values influence the perceptions that minority group members have of green spaces and how their sense of well-being is enhanced by access to green spaces (Amoly et al., 2014; Lobo, 2014). In a Canadian context, the limited research that exists has focused on Quebec (Hystad et al., 2019; Ngom et al., 2016; Robillard et al., 2023), and to a lesser extent larger cities such as Toronto (Dong & Liu, 2022; Rotenberg et al., 2022) and Vancouver (Ng et al., 2021; Quinton et al., 2022). To date, there appears to be a lack of community-based studies examining the effects of urban green spaces on the well-being of older Chinese immigrants in Canada (Dong & Liu, 2022).

My research, grounded in the city of Victoria, aims to address this gap by providing localized insights. This is particularly important given Canada's vast geography and the substantial variations in climate, urban design, and community resources across different cities. For instance, in Canadian cities like Victoria and Vancouver, which are frequently ranked among the most liveable communities, access to green space is

facilitated by relatively mild climates, higher median incomes, and proactive urban planning (BC Ministry of Health, 2018). Compared to Edmonton, where snow and freezing temperatures dominate half the year, the temperate weather of coastal British Columbia encourages year-round outdoor activities among seniors. This geographic advantage may explain why many older Chinese immigrants in Victoria engage in daily walking, gardening, or frequenting small parks even in winter months.

Moreover, healthy city indicators, such as low air pollution, high walkability scores, and investments in public green infrastructure, further support the physical, social, and mental well-being of older immigrant populations (Public Health Agency of Canada, 2017; WHO, 2016). Including a discussion of these city-level factors highlights how environmental and policy contexts critically shape green space engagement across different immigrant settings.

### ***1.3.1 Consistency with Policy Priorities for British Columbia***

British Columbia's ministries, Executive Council, and Parliamentary Secretaries issue annual mandate letters that outline key policy directions. The 2025 directives emphasize interrelated priorities in healthcare, environmental sustainability, community infrastructure, and social equity — all of which are highly relevant to this research (Government of British Columbia, n.d.). A central focus within the Ministry of Health's mandate is enhancing care for the province's aging population. The ministry commits to “improve the delivery of care for seniors and to steward public investments made in seniors' care to improve efficiency and effectiveness given the growing population of seniors in our province” (Government of British Columbia, 2025). This priority underscores the need to align health resources with the demographic reality of an aging society.

Environmental accessibility also features prominently in the 2025 mandate. The Ministry of Environment and Parks identifies a need to “find ways to increase access for families to British Columbia’s parks in a cost-efficient manner” (Government of British Columbia, 2025), reinforcing the province’s goal of ensuring public green spaces remain inclusive and affordable. In parallel, the development of community-oriented spaces is championed by the Ministry of Tourism, Arts, Culture and Sport. Its directive to “work with communities to support the development of recreation centres, community centres, arts and cultural centres, sports fields, and other critical social infrastructure” reflects a commitment to strengthening the social fabric through accessible and diverse public spaces (Government of British Columbia, 2025).

Finally, the Ministry of Citizens’ Services advances anti-racism as a guiding principle of public service. Its alignment with provincial equity and inclusion strategies reinforces the need for culturally responsive and just governance (Government of British Columbia, 2025). Together, these mandate letters form a policy framework for understanding government approaches to public health, environmental stewardship, infrastructure development, and social justice. They provide a foundation for evaluating how inclusive and sustainable strategies can be implemented across diverse population groups.

## **1.4 Conclusion**

This chapter has introduced the background, significance, and objectives of the study, along with the guiding research questions. It has highlighted the importance of understanding Chinese older immigrants lived experiences within a broader socio-political and urban planning context.

The remainder of the thesis is organized into five chapters. Chapter 2 provides a comprehensive review of the literature on healthy aging, urban green space, immigrant

integration, and related themes. It identifies critical knowledge gaps and situates this research within relevant interdisciplinary fields. Chapter 3 outlines the methodological approach of the study, including the qualitative design, ethical considerations, semi-structured interviews, participant recruitment process, and data interpretation and analysis procedures. It also reflects on the researcher's positionality and the value of using interviews as a method to center participants' voices. Chapter 4 presents the key findings, organized around themes that emerged from participants' interviews. It illustrates how older Chinese immigrants use and interpret green spaces, and the factors that shape their access and engagement. Chapter 5 offers a critical discussion of the findings in light of existing literature and theoretical perspectives, exploring the structural and cultural influences on well-being and belonging. It then concludes the thesis by summarizing the main contributions, acknowledging limitations, and offering policy recommendations to help create more inclusive and age-friendly urban environments for immigrant seniors.

## **Chapter 2: Aging, Immigrant Well-being, and Access to Green Spaces**

British Columbia remains a significant settlement area for older Chinese immigrants, many of whom historically clustered in ethnocultural communities like Chinatown to access social support and maintain cultural familiarity, especially during the early stages of immigration (Hwang, 2008). According to the 2021 Census, Chinese Canadians make up 4.5% of Victoria's population, with a notable proportion being older adults. While exact percentages of seniors within the Chinese population are not specified, Chinese Canadians have a median age of around 42, which is higher than other racialized groups in the region, pointing to an aging demographic (Statistics Canada, 2021).

In British Columbia, a substantial number of seniors (age 65+) are immigrants, and many face challenges such as language barriers, economic insecurity, and difficulties in accessing essential services (Stewart et al., 2011). Recent data indicate that 63% of newly arrived immigrant seniors report an inability to speak either English or French, which increases their reliance on cultural enclaves for support (Statistics Canada, 2021; Canada.ca, 2023). These trends underscore the crucial role that community services play in supporting the integration and well-being of older immigrants of any ethnic background in urban centres.

### **2.1 Gentrification and its Impact on Older Chinese Immigrants in Chinatowns**

As Chinatown has developed into a popular tourist site, its role as a traditional settlement area for older Chinese immigrants has diminished, a trend shaped by tourism alongside broader forces such as suburbanization and urban redevelopment. Contemporary city governments are keen on reconstructing these 'exotic' places in a sanitised form to boost urban tourism and consumer capitalism (Cresswell, 2014). This change has

diminished the focus on the living conditions and housing situations of Chinese seniors, as tourism and economic development have taken precedence. This phenomenon prompts us to think deeply about who benefits from the visibility of cultural diversity in urban spaces and whether such staging truly serves the interests of immigrant communities or merely repackages their cultural heritage for external consumption. While there is extensive literature on the historical and cultural significance of Chinatowns in North America (Lai, 2007; Wong, 1995; Yamashita, 2013), recent research on the specific living conditions of older Chinese residents is limited, likely due to a combination of gentrification and commercialization of these areas.

Gentrification in Chinatowns, especially in cities like Vancouver and Los Angeles, has been well-documented as a key factor displacing low-income, older Chinese residents (Lin, 2008; Pottie-Sherman, 2013). As property values rise and traditional housing options become less affordable, many seniors are forced to relocate or struggle to find suitable housing within their cultural community. This process weakens the social support networks that were once integral to these communities (Anderson, 2019; Tolfo & Doucet, 2022). The shift towards tourism has also transformed Chinatowns into commercialized spaces, pushing out affordable housing and limiting access to culturally relevant services for seniors (Fung, 2016). This transformation is a significant factor in the scarcity of recent literature focused on the living conditions of older Chinese immigrants, as research and policy tend to focus more on economic development than the social needs of vulnerable populations like seniors (Liu, 2022).

Victoria's Chinatown, the oldest in Canada, illustrates this dynamic. Once a hub for community life and cultural preservation, the neighbourhood is now largely oriented toward heritage tourism. While the work of David Chuenyan Lai (1972, 1997, 2007) has extensively documented the historical, architectural, and community functions of

Victoria's Chinatown, less attention has been paid to the contemporary housing and social challenges facing older Chinese residents in the area. The growing emphasis on beautification and commercial appeal may obscure deeper issues of exclusion, affordability, and aging-in-place for immigrant seniors.

The implications are substantial: as housing becomes more expensive and less accessible, older Chinese immigrants may face increased isolation, difficulties accessing social services, and a decline in overall well-being. This situation calls for further research and policy action to ensure that aging Chinese immigrant populations are not neglected amid urban redevelopments.

## **2.2 The Local Victoria Context: History, Community Supports and Urban Planning for Older Chinese Immigrants**

Many older Chinese immigrants in Victoria, similar to those in other parts of British Columbia, rely on cultural enclaves, family networks, and community organizations for social integration and navigating their health and well-being. While Victoria's smaller scale may limit services specifically tailored to Chinese seniors, the city's growing diversity has prompted initiatives to make services more inclusive for immigrant populations, including seniors. The Chinese Community Services Centre of Victoria offers assistance and services in a welcoming environment, striving to build a stronger Chinese community. Additionally, the Victoria Chinatown Care Centre provides culturally responsive, 24-hour resident-centered care, primarily serving seniors of Chinese descent. The City of Victoria (2020) has also developed a Seniors' Action Plan to promote healthy aging and inclusivity, addressing the needs of all seniors, including immigrants.

This study is based in Victoria, BC. Victoria was selected as the location of the study as it is one of Canada's demographically oldest cities with over 23% of the city's

population being over the age of 65 in 2021—considerably higher than the national average of 19% (Statistics Canada 2022a; 2022b). The mild climate, beauty and access to nature and relaxed lifestyle are two incentives that attract immigrants here. While Victoria does not have as large a Chinese community, compared to Vancouver, its Chinatown remains a key cultural and social hub for Chinese Canadians, including older adults. What is particularly interesting about Victoria is the presence of subtle, everyday reminders of Chinese Canadian history and ongoing presence—such as architectural features, symbolic markers, the Chinese school, and the Sun Yat-sen statue—that are embedded in the urban landscape. These banal yet meaningful elements differentiate Victoria from other cities, where such representations may be less visible or take different forms (Fred Chou, personal communication, April 29, 2025).

The Chinese Immigrants population in Victoria is less densely concentrated than in Vancouver, which results in far fewer ethnocultural services or community resources. In 2021, approximately 4.5% of Greater Victoria’s population identified as Chinese, compared to 18% in Vancouver. However, especially for seniors, the cultural heritage of Chinatown and community organizations remains vital for providing social support. In both Vancouver and Victoria, older Chinese adults have opportunities to use local amenities such as green spaces, which are valued for their social and recreational purposes (Pleson et al., 2014).

### **2.3 Social Isolation among Older Chinese Immigrants**

Studies have shown that older immigrants are at a higher risk of social isolation, diminished mental health, and limited access to public services (Koehn et al., 2013; Luo & Menec, 2018). Older Chinese immigrants represent one of the fastest-growing minority groups in Canada, yet they face distinct challenges that increase their vulnerability, such as language barriers, social isolation and loneliness, and healthcare access (Chen et al.,

2022; Hwang, 2008; Lai & Leonenko, 2007). Furthermore, the COVID-19 pandemic has heightened the marginalization of older Chinese immigrants, with increased instances of racial discrimination and reduced mobility that has contributed to their isolation (Cheah et al., 2020). Older immigrants often encounter systemic barriers in healthcare, social services, and housing, further exacerbating their sense of exclusion (Brotman, 2003; Salma & Salami, 2020).

Despite their vulnerability to marginalization, some studies examine the leisure activities of older Chinese migrants without explicitly discussing how green spaces are utilized. Most research focuses on how minority groups use green spaces in general, but few specifically explore their cultural and social significance for older Chinese immigrants (Byrne & Wolch, 2009). After immigration, older Chinese immigrants continue to maintain distinct perceptions and lifestyles shaped by their cultural backgrounds (Li & Chong, 2012). The alignment between individuals' lifestyles and the opportunities or constraints in their environment can significantly impact well-being. Socio-cultural norms influence perceptions, attitudes, and values, which in turn shape daily activity choices (Alves, 2011; Scheiner, 2010). Liu et al. (2008) argue that traditional Chinese cultural values influence leisure patterns, leading to activities distinct from those of seniors of European descent.

Older Chinese adults tend to favour slower and collective leisure activities over intense competitive sports. Cheng et al. (2019) found that they are more likely to engage in activities such as mah-jong, card games, and cultural pastimes like calligraphy. They also frequently participate in group activities, such as chorus singing and square dancing. Similarly, Wang and Lo (2007) studied the shopping behaviours of Chinese immigrants in Canada, suggesting that ethnic preferences influence their daily activities and routines.

Another important theme in the literature is the role of family in shaping the experiences of older Chinese immigrants. Rooted in Confucian values, the expectation of filial piety (孝, xiào) remains central in elder care practices within Chinese immigrant families (Feng, 2017). However, migration and cultural shifts in Canada introduce complex intergenerational dynamics, reshaping traditional caregiving expectations.

The relationship between older Chinese immigrants and their children is often defined by solidarity and conflict, as they navigate the intersection of traditional values and Western cultural norms (Lin et al., 2015). While parents may expect care and deference from their children, second-generation Chinese Canadians may struggle to balance filial responsibilities with their own aspirations and commitments (Liu et al., 2019). Such conflicts are further exacerbated when children prefer professional eldercare services in contrast to their parents, challenging traditional notions of family caregiving (Lan, 2002).

Moreover, the sense of dependence among older immigrants can be heightened due to language barriers and unfamiliarity with Canadian social structures. Many feel a loss of autonomy, particularly those who were once financially independent but now rely on their children for support (Guo et al., 2020). In some cases, cultural differences in emotional expression and communication styles deepen misunderstandings, making it difficult for aging parents and their children to maintain close relationships (Chung, 2006).

Older Chinese immigrants in Canada typically reside in multigenerational households, providing both social support and potential tension. Studies show that co-residence with adult children can lead to mixed experiences—some benefit from companionship and assistance, while others report feelings of isolation and dependency within their own families (Caidi et al., 2020; Guo et al., 2016).

However, not all older Chinese immigrants choose to live with their children. Some opt for independent living or community-based housing, though access to culturally appropriate senior housing remains limited. In contrast, others become "floating grandparents," frequently traveling between Canada and their home country to care for grandchildren, reflecting a reconfigured model of intergenerational support (Qi, 2018).

Furthermore, gender roles influence caregiving patterns. Research suggests that daughters are often expected to assume elder care responsibilities, even in immigrant families where traditional gender norms may be shifting (Cong & Silverstein, 2014). These evolving caregiving expectations highlight the need for formal elder care services that align with cultural values while also addressing the realities of modern immigrant life.

Despite the strong emphasis on family support, older Chinese immigrants face several barriers to accessing elder care services. The preference for family-centered caregiving may delay the use of formal health services, leading to increased stress for both elders and caregivers (Sun, 2014). Additionally, the fear of being a burden often discourages older immigrants from seeking external support, further exacerbating isolation (Treas & Mazumdar, 2002).

#### **2.4 Cultural Dimensions of Healthy Aging Among Older Chinese Immigrants**

Healthy aging, as defined by the World Health Organization (WHO, 2015), is the process of developing and maintaining the functional abilities that enable well-being in older age. This concept is particularly critical for immigrants, who often face compounding challenges such as language barriers, cultural dissonance, and limited access to healthcare services (Guruge et al., 2015). For older Chinese immigrants, these difficulties can intensify feelings of isolation, marginalization, and vulnerability, thereby increasing the importance of supportive environments that promote their physical, mental, and social well-being (Koehn et al., 2013; Luo & Menec, 2018).

Unlike Western conceptions of retirement as a period of rest and leisure, many Chinese older adults perceive aging as a continued phase of familial responsibility. They often contribute through caregiving, household tasks, and childcare, which in turn reinforces intergenerational bonds and reciprocity—offering them emotional and practical support from adult children (Sun, 2014).

Chinese cultural values around aging are also deeply influenced by Traditional Chinese Medicine (TCM) and holistic health practices. Concepts such as the balance of yin and yang (阴阳) inform daily decisions around diet, exercise, and health maintenance (Cong & Silverstein, 2014). Common aging-related practices include the consumption of herbal supplements, warm foods (yang) to counter cold-related ailments, and engagement in gentle physical exercises such as Tai Chi and Qigong to improve mobility, circulation, and mental clarity. Preference for non-Western modalities like acupuncture, cupping, and herbal remedies is widespread, sometimes delaying the use of Western medical services (Guo et al., 2020).

These cultural health beliefs can result in underutilization of mainstream healthcare systems. Older Chinese immigrants may postpone seeking medical attention until symptoms become severe, partly due to unfamiliarity with Western systems and the lack of culturally competent care providers. Furthermore, mental health is often stigmatized; emotional struggles are frequently somatized, expressed as physical discomfort rather than psychological distress, making diagnosis and treatment more complex (Liu et al., 2019).

## **2.5 The Role of Green Spaces in Supporting Healthy Aging**

Numerous studies have shown that green spaces play a significant role in enhancing overall well-being (Jabbar et al., 2022; Kothencz et al., 2017; Ma et al., 2019).

Importantly, green space is not a monolithic category but a diverse and socially constructed concept whose meanings vary across individuals and communities (Taylor & Hochuli, 2017). This study adopts an inclusive understanding of green space that centres lived experiences.

Empirical research highlights their role in reducing risks for chronic diseases, including cardiovascular conditions and diabetes, and in alleviating stress and depressive symptoms (Astell-Burt et al., 2013; Villeneuve et al., 2012). For Chinese older adults, these spaces may offer culturally familiar forms of engagement such as group walking, Tai Chi, and gardening—activities that align with their health beliefs and contribute to a sense of belonging.

Research shows that green spaces play an important role in promoting physical activity and social engagement, supporting the healthy aging of immigrant seniors (Ageing International, 2020). This highlights the essential role of urban planning in fostering both mental and physical health by ensuring access to culturally appropriate services and recreational amenities for seniors (Enssle & Kabish, 2020). Older Chinese adults' perceptions of green spaces are shaped by cultural traditions, social expectations, and urban planning practices, influencing how these spaces are designed and used. Research suggests that Chinese seniors view green spaces not only as recreational areas but also as extensions of community life, where social interactions, relaxation, and physical activities such as Tai Chi and dancing take place (Yung et al., 2016). In densely populated cities like Hong Kong, residents highly value green spaces for their restorative and aesthetic benefits, yet accessibility, crowding, and maintenance influence their willingness to use and support conservation efforts (Lo & Jim, 2010). Cultural differences in park usage further highlight that Chinese seniors often prefer green spaces that facilitate

structured social engagement, such as shaded seating areas for conversations, open plazas for group activities, and walking paths for exercise (Özgüner, 2011).

Furthermore, the aesthetic qualities of green spaces, including natural elements and landscape diversity, play a critical role in stress recovery and well-being among older adults (Wang et al., 2019). However, cities undergoing densification face challenges in maintaining and expanding urban green spaces, often prioritizing development over accessible, age-friendly park designs (Haaland & van Den Bosch, 2015). This creates disparities in green space access for older adults, particularly for immigrant seniors in North American cities like Vancouver and Victoria, who may experience difficulties finding culturally familiar environments. Understanding these perceptions is essential for designing green spaces that cater to the needs of aging Chinese populations, ensuring that urban parks foster social connection, physical activity, and mental well-being while respecting cultural traditions and preferences (Bowman & Singer, 2001).

Beyond individual well-being, green spaces are increasingly recognized by urban planners and public health practitioners as key infrastructure that enhances environmental quality. They improve air quality, reduce urban heat, and buffer noise pollution, making neighborhoods more livable for all residents (Lee & Maheswaran, 2011). For older adults, especially those with limited mobility or income, nearby green spaces offer affordable, accessible opportunities for active aging and social inclusion (Wood et al., 2023).

## **2.6 Theoretical and Methodological Approaches in Existing Literature**

The literature on aging, migration, and green space use among older adults—particularly immigrant populations—draws from a range of theoretical perspectives that help to unpack the complex intersections of place, identity, and well-being. This section critically examines three key frameworks commonly employed in relevant scholarship: the Social Determinants of Health, Place Attachment Theory, and Environmental Justice. It

also explores how these frameworks influence methodological choices, particularly the use of qualitative, community-engaged, and interpretive approaches.

### ***2.6.1 Social Determinants of Health***

The Social Determinants of Health (SDH) framework is a foundational approach in public health research that recognizes how non-medical factors, such as housing, transportation, income, education, and access to community services, shape health outcomes across the lifespan (Krumeich & Meershoek, 2014). As Braveman and Gottlieb (2014) argue, these determinants are the “causes of the causes”—they form the structural conditions that influence people’s opportunities to live healthy lives. This framework is particularly relevant for older immigrants, who may face cumulative disadvantages due to age, migration status, language barriers, and socioeconomic precarity.

Urban green spaces are increasingly understood as part of the built environment that contributes to the social determinants of health (Douglas et al., 2017; Bedimo-Rung et al., 2005). These spaces offer important physical, mental, and social health benefits, including opportunities for physical activity, psychological restoration, stress reduction, and social interaction. However, older immigrants may not benefit equally from these resources. Studies show that despite living in close proximity to parks, many racialized seniors face barriers to access green spaces due to fear of crime, lack of culturally appropriate facilities, or language exclusion (Byrne & Wolch, 2009; Liu et al., 2021).

In a Canadian context, SDH has been employed to explore health disparities between immigrant and non-immigrant seniors. For instance, Brotman (2003) highlights the structural limitations of multicultural health services, arguing that access to care for immigrant elders is often fragmented, reactive, and ill-equipped to account for cultural diversity. Similarly, Curtis and Lightman (2017) found that racialized immigrant seniors

are significantly less likely to receive public pension income, pointing to systemic exclusions from economic supports that impact health and mobility.

Environmental and public health scholars have extended the SDH model to emphasize the importance of equitable green infrastructure (Sudduth Page, 2024). Jennings et al. (2016) propose that urban parks are not simply recreational assets but essential components of healthy neighborhoods. Their research links green space accessibility to broader indicators of health equity, noting that disparities in park quality and safety are correlated with health outcomes in urban settings. Similarly, studies conducted in Australia by Gao et al. (2020) illustrate how green space access affects the well-being of older Chinese immigrants. Although participants valued green space highly, their experiences were mediated by transportation availability, neighborhood walkability, and cultural familiarity of the space, all of which align with key SDH factors.

A compelling contribution to this discourse is provided by Edge et al. (2023), who examine how urban and rural green spaces influence immigrant well-being and settlement in Canada. Their findings show that green spaces support both individual health and community integration, yet immigrant elders often lack culturally and linguistically inclusive programming to facilitate meaningful engagement. This underscores that access to green space alone is insufficient; equitable design, cultural sensitivity, and inclusive practices are necessary to realize health benefits.

Further evidence comes from Hordyk et al. (2015), who explored the everyday experiences of immigrant families in Montreal and found that green spaces provided essential respite from overcrowded housing and stressful urban conditions. However, their use was often constrained by concerns about safety, lack of knowledge about local resources, and fears of social exclusion—concerns that are particularly salient for older adults with limited mobility or language skills.

The COVID-19 pandemic brought renewed attention to these disparities. Bikomeye et al. (2021) argue that investing in public green space is “more essential than ever” for resilience and equity, as racialized and low-income populations faced heightened barriers to safe, restorative environments during periods of lockdown and social distancing. This resonates with studies like Grima et al. (2020), which found that access to urban nature was strongly associated with reduced stress and increased psychological well-being during the pandemic, especially for populations experiencing housing insecurity or social isolation.

From a policy perspective, the SDH framework calls for integrated, cross-sectoral planning that views parks and green infrastructure not as luxuries, but as public health necessities. This perspective aligns with work by the World Health Organization (2021), which emphasizes that creating supportive environments, including safe and accessible public green spaces, is crucial for health promotion and age-friendly community design.

This thesis builds on the SDH approach by exploring how older Chinese immigrants in Victoria, BC, experience and access green space through the lens of social and spatial inequality. It (Table 1) considers how green space access is shaped by transportation networks, cultural relevance, language access, economic resources, and gendered expectations—factors that intersect to produce unequal opportunities for well-being in later life.

*Table 1: Social Dimensions of Health Relevance to Chinese Older Immigrants*

<b>Social Dimensions</b>	<b>Relevance to Chinese Older Immigrants</b>
Socioeconomic Status	Income <sup>1</sup> Class background influences access to resources, housing, and employment.

<sup>1</sup> Income levels in this study were categorized into three simplified groups based on participants’ self-reported annual income and my own estimation for analytical clarity. These categories included low-income (below \$40,000 per year), middle-income (\$40,000–\$60,000), and higher-income (above \$60,000). While these

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Language and Communication	English proficiency affects social integration, healthcare access, and employment.
Social Support Networks	Living arrangements (family, alone, tenants) impact well-being and mental health.
Employment and Financial Security	Retirement status and employment opportunities determine economic independence.
Housing and Neighbourhood	Housing type (own vs. rent) influences stability and social inclusion.
Immigration and Integration	Different immigration pathways shape access to social and healthcare services.

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### ***2.6.2 Place Attachment Theory***

Place attachment refers to the emotional, cognitive, and social bonds that people develop with specific places through lived experience, memory, and routine (Lewicka, 2011; Seamon, 2014; Tuan, 1979). As a theoretical lens, it provides a rich framework for understanding how environments contribute to identity, belonging, and well-being, particularly among populations who have experienced displacement, such as immigrants and refugees. These attachments are not only about sentimentality; they actively shape behaviors, reinforce cultural identity, and support mental and physical health (Scannell & Gifford, 2010).

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thresholds are not directly drawn from official Statistics Canada metrics, they reflect the local economic context of Victoria and allow for meaningful comparisons across participants. This simplified classification aimed to capture general patterns of socioeconomic status without overcomplicating the analysis, especially given that many participants discussed income in approximate terms rather than specific amounts.

For older immigrants, place attachment is both vital and fragile. Migration later in life involves significant disruptions to place-based identity, particularly when individuals are removed from familiar cultural landscapes, languages, and social networks.

Establishing a renewed sense of place in a host country can be challenging, especially when compounded by racism, discrimination, structural exclusion or cultural invisibility in urban design (Chen et al., 2022; Wen Li et al., 2010). In this regard, urban green spaces can become crucial “third places” (Oldenburg, 1999), public settings outside of home and work where individuals gather, observe, and participate in community life.

Multiple studies support this interpretation. Rishbeth (2001), in her work on ethnic minority groups and public open space, found that inclusive landscape design that reflects users’ cultural practices, such as shared walking paths, shaded seating, or familiar vegetation, can significantly enhance feelings of comfort and belonging. Similarly, Hsu (2014) describes how Chinese monolingual seniors in Montreal perceived green spaces as sites where they could “feel at home” again, especially when surrounded by familiar language, food, and social cues.

For many Chinese elders, daily routines like walking in parks, practicing Tai Chi, or gardening are deeply embedded cultural practices that link well-being with landscape. He and Zhu (2018) found that urban gardening in Chinese communities serves not only as a leisure activity but also as a way to express autonomy, connect with heritage, and cope with marginalization. These spatial routines help construct what scholars call “cultural landscapes of care,” environments that are both physically supportive and emotionally resonant (Williams, 2014; Liu et al., 2021).

Importantly, place attachment is not merely about proximity or frequency of use; it is mediated by perceptions of safety, cultural familiarity, and relational connectedness. Older immigrants may avoid certain parks not due to distance, but because of past

experiences of discrimination or discomfort. Liu et al. (2021) point out that the presence of culturally sensitive design features, such as signage in multiple languages, accessible trails, and rest areas, can significantly enhance the ability of seniors to form positive attachments to place.

However, place attachment is also dynamic and relational. Gao et al. (2022) highlight that for Chinese immigrants in Australia; place attachment evolves over time and is closely tied to intergenerational relationships and community interactions. Their findings show that when seniors are able to share green spaces with grandchildren or other co-ethnic peers, these environments become imbued with new meaning and purpose. This relational dimension reinforces the argument that aging in place is not just about staying in one's home but about remaining connected to meaningful places and people.

In my research, place attachment provides an important interpretive lens through which to understand how older Chinese immigrants in Victoria engage with green spaces, not only as physical locations, but as sites of memory, adaptation, and identity work. The semi-structured interviews offer rich narratives about how participants map emotional significance onto everyday landscapes, demonstrating how access to nature supports not just health, but also dignity, resilience, and belonging in later life.

### ***2.6.3 Environmental Justice and Urban Nature***

Environmental justice (EJ) is a framework rooted in civil rights and environmental movements that critiques the unequal distribution of environmental benefits and harms along racial, economic, and geographic lines (Mohai et al., 2009). Initially focused on issues like toxic waste and pollution, environmental justice has broadened to include access to positive environmental resources such as green space, clean air, and walkable neighborhoods (Schlosberg, 2007). Agyeman et al. (2003) describe this evolution as part

of a push toward “just sustainabilities,” a concept that demands equity in access to environmental goods within the broader goal of sustainability.

In urban planning and public health research, the concept of green inequity is increasingly prominent. Scholars like Byrne and Wolch (2009) have documented how public green spaces in cities are disproportionately located in affluent, often white neighborhoods, while marginalized and immigrant communities contend with lower-quality parks, limited amenities, and higher environmental stressors. These disparities have long-term implications for physical and mental health, especially for older adults who are more reliant on neighborhood resources due to mobility constraints.

Rigolon et al. (2021) conducted a systematic review linking green space access to health equity. Their findings underscore that without an environmental justice lens, green space initiatives risk exacerbating health disparities by privileging already advantaged populations. They also critique the common assumption that “if you build it, they will come,” showing that marginalized users, including immigrant seniors, may feel alienated or unsafe in spaces that lack cultural or social relevance.

In the Canadian context, Liu et al. (2021) found that Chinese seniors in Toronto often avoided certain parks that lacked culturally familiar features or where they had experienced discrimination. Instead, they gravitated toward spaces that felt “like home,” often creating informal social environments such as walking circuits or community-organized Tai Chi gatherings. However, such adaptive practices are rarely accounted for in park planning or funding decisions.

Moreover, environmental justice research critiques the performative inclusivity often seen in “green gentrification,” where the creation of attractive green amenities leads to rising housing costs and the eventual displacement of low-income and immigrant residents (Wolch et al., 2014). As Tossutti (2023) argues, municipal parks and recreation

services must actively engage with the demographic realities of migration and “superdiversity” to remain inclusive and equitable.

Studies like that of Espinoza Suarez et al. (2024) reinforce the need for participatory design approaches that meaningfully include immigrant voices in green space planning. Their scoping review found that most urban green infrastructure decisions are still dominated by technocratic and Eurocentric paradigms that exclude racialized and immigrant elders from decision-making processes. Without such inclusion, policies risk reinforcing the exclusion they aim to redress.

From a public health perspective, the lack of inclusive, accessible, and culturally resonant green space can contribute to social isolation, sedentary behavior, and diminished mental health among older immigrants. This is particularly troubling in the context of Canada’s aging population and the growing reliance on outdoor environments as low-cost health interventions. As Bikomeye et al. (2021) argue, investment in green space is not only an environmental issue but a matter of resilience and equity.

In this thesis, an environmental justice lens is used to interrogate the structural and symbolic dimensions of green space access among older Chinese immigrants in Victoria, BC. It asks not only whether participants have access to green space, but also what kind of access they have, who gets to shape these spaces, and how experiences of marginalization, resilience, and adaptation unfold in these contexts. The findings aim to contribute to urban policy dialogues about how to design cities that are not only greener, but also more just and inclusive for aging immigrant populations.

## **2.7 Conclusion**

Despite the depth and breadth of existing research, this chapter identified several gaps. Much of the literature on green space and aging is not culturally specific, often treating older adults as a homogenous group. Likewise, immigrant-focused studies rarely

explore the role of green space in fostering belonging, autonomy, or intergenerational connection. In the Canadian context, few studies address the lived experiences of Mandarin-speaking older Chinese immigrants, particularly in smaller cities like Victoria, BC, where language access, community infrastructure, and urban design may differ significantly from larger metropolitan areas.

To address these gaps, this study adopts a qualitative, community-engaged approach grounded in the lived experiences of 16 older Chinese immigrants in Victoria. The following chapter outlines the methodological design, including ethical considerations, the use of semi-structured interviews, and data analysis strategies. It also discusses the importance of conducting research in participants' preferred language and places of comfort, which aligns with the critical frameworks discussed in this chapter and ensures that the knowledge produced is both culturally grounded and policy relevant.

### **Chapter 3: Research Design and Methods**

My research focuses on understanding how green spaces are being used by older Chinese immigrants to improve their well-being and reduce feelings of loneliness and marginalization (Amoly et al., 2014). Many studies on green space and older adults use surveys and spatial analysis to examine access, usage patterns, and health outcomes. These studies often focus on measurable variables such as proximity to green space (GIS mapping and neighborhood analysis), frequency and duration of visits (survey questionnaires), perceived benefits (self-reported well-being, stress reduction, or social engagement), and health outcomes (linking green space access to physical/mental health indicators). My research adopts a qualitative approach, using semi-structured interviews, because it provides different ways to advance knowledge, compared with survey data, and explore the cultural, emotional, and identity-related dimensions of green space for immigrant seniors. My study can contribute to the well-being of Chinese older immigrants by capturing personal narratives and lived experiences, exploring the role of memory, migration history, and identity in shaping seniors' engagement with nature, identifying culturally specific barriers and facilitators to green space use, informing community-based and policy-driven solutions that are culturally relevant.

The participant group is drawn from Mandarin-speaking Chinese immigrants who are associated with VIRCS (Victoria Immigrant and Refugee Centre) or the BVU (Broad View United Church) due to these two non-profit organisations often gathering a large number of Chinese immigrants, especially older Chinese immigrants, into their respective places and activities. In general, they also regularly organise activities for this group, such as table tennis time and talks on the welfare of older immigrants. I've also built community trust and deep links with them ahead of time. Through conducting semi-structured interviews, this study examines the roles that green spaces play in physical

health, mental well-being, and social inclusion for older Chinese immigrants and its connection to social inclusion, thereby identifying the dilemmas they face and suggesting solutions (Hartig, 2021).

I conducted 16 semi-structured interviews to obtain data on my research topic. Mandarin was chosen as the interview language because it is the first language of both myself and the interviewees. This linguistic choice was not merely a matter of convenience, but a deliberate methodological decision aimed at enhancing the depth, authenticity, and cultural relevance of the data collection process. Using Mandarin ensured that interviewees could express themselves naturally, without the constraints of translating their thoughts into English. In addition, many older Chinese immigrants, particularly first-generation seniors, may not have full fluency in English, which can inhibit the richness of their responses.

Mandarin serves as more than just a means of communication, it carries cultural meanings, historical references, and collective memories that shape how participants view their experiences. If interviews were conducted in English, certain culturally embedded concepts related to filial piety, well-being, and intergenerational dynamics might be misrepresented or diluted. For instance, phrases like “落叶归根” (luò yè guī gēn, “fallen leaves return to their roots”), which metaphorically expresses the deep connection between aging, homeland, and identity, would not carry the same weight in English translation. By using Mandarin, I was able to capture these culturally significant expressions in their original form, preserving their full meaning and contextual relevance.

As an interviewer who is also fluent in Mandarin, I was able to establish stronger rapport and trust with participants. Language is a key factor in building relationships and reducing power imbalances in qualitative research (Cameron et al., 2018; Tenzer & Pudelko, 2017). By speaking the participants' first language, I was able to minimize the

sense of “outsider” status, making the research interview interactions feel more like a conversation than an interview, encourage participants to engage more deeply in telling their story, as they were not constrained by the need to “perform” in a second language and use culturally appropriate forms of address and communication styles, which helped create a respectful and comfortable interview environment.

I acknowledged the role of language in shaping knowledge production. Mandarin is my first language, and while I conduct academic research in English, I remained critically aware of the linguistic privilege embedded in English-dominant academic discourse. To support the clarity and coherence of my English writing, I have used the AI-based tool named Grammarly. This tool assisted with grammar and editing, particularly as English is my second language. However, all conceptual framing, thematic analysis, and interpretations were grounded in my own critical engagement with data and literature. I also recognized that AI tools may reflect dominant linguistic norms and cultural assumptions. Their use was therefore approached with caution and guided by principles of cultural humility, anti-oppression, and methodological transparency. For example, I avoided changes that would erase culturally specific expressions or alter the tone of my voice as a multilingual speaker. I also documented how I used the tool with specific examples and step-by-step instructions below (3.5.3 Validation).

To explore the experiences of older Chinese immigrants in relation to green spaces in Victoria, BC, semi-structured interviews provided rich, in-depth data to address the research questions. Additionally, studies suggest that cultural preferences and values shape how different ethnic groups engage with green spaces (Byrne et al., 2010;). Hence, this research informs urban planning and policy efforts aimed at creating more inclusive, immigrant-friendly environments (Bell et al., 2014).

### 3.1 Positionality Statement

Drawing from Nixon's Coin Model of Self-Reflection<sup>2</sup> (2019, p. 6), I find myself positioned at both ends of the spectrum. At the apex, I inhabit the role of the able-bodied settler in Victoria, BC. Yet, at the base, I embody the identity of a first-generation Chinese student from an Asian labour-class family. Another intersection of my identity is my experience as a racialized female. This duality has shaped my understanding of marginalization and resource scarcity, as described by Nixon's model. The model emphasizes the dualities of privilege and marginalization that often exist simultaneously within individuals, highlighting the importance of reflexivity when navigating complex power dynamics (Smith, 2020).

As an insider-researcher, I recognize the critical role that intersectionality and cultural safety play in my approach (Crenshaw, 1991; Nixon, 2019, p. 8). The concept of intersectionality, originally articulated by Crenshaw, is pivotal in understanding the compounded forms of discrimination and privilege that individuals experience (Collins, 2020; Phoenix & Pattynama, 2006). In my case, the intersection of race, gender, sexual orientation, and immigrant status informed my interactions with research participants, my interpretations of the findings, and my conclusions for the broader research community. These shared intersections mean I have an empathetic understanding of how structural barriers, such as language limitations, economic insecurity, or lack of culturally sensitive services, can limit access to public amenities like green spaces. I can relate to the

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<sup>2</sup> The Coin Model of Self-Reflection visually represents the dualities of privilege and marginalization experienced by individuals. In this model, individuals may occupy a position of privilege (apex) in certain aspects of their identity while being marginalized (base) in others. The model encourages continuous reflection and adaptation of research approaches to ensure cultural safety, ethical integrity, and inclusivity.

experience of engaging with urban environments that may not always prioritize cultural or linguistic needs in the design and maintenance of public spaces, which can be designed to promote equity and inclusion for minority groups.

In qualitative research, particularly when working with marginalized populations, empathy, deep listening, and respect for lived experience are central to ethical and rigorous interviewing (Derksen et al., 2015; Prior, 2018). Good interviewers prioritize participant voice and agency, creating space for meaning-making that arises organically from the participants' narratives rather than imposing predetermined frameworks. My interview approach drew upon these principles, emphasizing relational ethics and listening over speaking, which aligns with Nixon's (2019) Coin Model of Self-Reflection. As Nixon argues, reflexive practices require attentiveness to how one's privileges and biases may shape the research process and outcomes. Incorporating this reflexivity helped ensure that participant voices were not overshadowed by researcher interpretation, and that my analytical lens remained rooted in principles of equity, respect, and social justice (Brown & Strega, 2015).

I approached this research from a position of cultural humility, which I understand as a lifelong commitment to self-evaluation and redressing power imbalances, while valuing participants as the experts of their own lives (Tervalon & Murray-García, 1998), by recognizing and respecting the complex cultural identities and life experiences of older Chinese immigrants. As a younger researcher with a shared linguistic and cultural background with my participants (Mandarin speaking Chinese immigrant), I was mindful of the generational, social, and migratory differences that shaped our perspectives. I made intentional efforts to listen attentively and without making assumptions, allowing participants to guide the direction of conversations based on what felt most meaningful to them. Conducting the interviews in Mandarin enabled participants to express themselves

more fully and authentically. I also remained reflexive throughout the analysis process, questioning my own interpretations and consulting with participants through member checking to ensure that their narratives were represented with care and accuracy (Braun & Clarke, 2022). Rather than positioning myself as an expert, I aimed to co-create understanding with participants, grounded in mutual respect (Kamlongera, 2023).

### **3.2 Ethics Approval**

Prior to commencing any data collection activities, I received ethics approval (#24-0409) from the University of Victoria's human subjects review board in the beginning of December 2024, ensuring that my research adhered to ethical guidelines and standards for the protection of participants. I acknowledged the importance of respecting community protocols and cultural sensitivities. Consent was obtained prior to each interview with each participant receiving a copy of the consent form (Appendix B), in English or Mandarin as preferred. Consent was explained including information regarding confidentiality and the right of refusal to participate, or to terminate participation at any time. The interviews were confidential, and only the researcher had access to voice recordings that were used to produce a transcript. Participants were made anonymous in the thesis through the use of pseudonyms.

Demonstrating cultural competence and humility in interactions with informants is essential for gaining their trust and cooperation (Betancourt et al., 2005; Brascoupé & Waters, 2009). Respect for cultural norms, customs, and traditions were prioritized throughout the research process to ensure participants feel valued and respected (Memon et al., 2021; Pelzang & Hutchinson, 2018). Establishing rapport with informants through active listening, empathy, and genuine interest in their experiences fosters mutual trust and collaboration (Israel et al., 2005; Wallerstein et al., 2019). This involved conducting preliminary meetings or informal conversations to discuss the research objectives and

address any questions or concerns raised by participants, which strengthens transparency and collaboration (Flicker et al., 2007). Furthermore, adapting research materials and methods to meet the cultural and linguistic needs of participants ensures ethical engagement and maximizes participation (Horowitz et al., 2009).

### **3.3 Study Participant and Recruitment Methods**

To facilitate recruitment, I designed a study poster and distributed it to relevant community organizations via email. Additionally, I posted recruitment materials at Victoria Immigrant and Refugee Centre Society (VIRCS) and Broad View United Church (BVU) to encourage potential participants to contact me directly once I obtained ethics approval. I employed snowball sampling as a recruitment method, where initial participants were asked to refer others in their community who met the study's inclusion criteria (Munhall, 2012). This approach was particularly useful for reaching older Chinese immigrants, as it leveraged existing social networks and trust-based relationships within the community. By using both formal outreach through organizations and informal referrals, I was able to connect with a broader and more diverse group of participants.

The criteria I used for inclusion in my research was for participants to be over age 55, and Chinese and Mandarin speaking. The minimum length of time that participants had lived in Victoria was required to be over one year to ensure information on their lived experiences relating to the research was viable. The participants for my project consisted of 16 older Chinese immigrants whose mother language was Mandarin (with ages from 57 to 80 years old). The interviews were conducted at a place of participant choice such as participants' homes, parks or cafes around their homes, and by remote interview. Of the 16 interviews, 1 was conducted in an outdoor green space named Beckwith Park, 10 took place in participants' homes, 2 were conducted remotely via phone call and the remaining 3 were held in public indoor café/restaurant spaces such as McDonalds. These settings

provided participants with flexible and familiar environments in which to share their experiences, contributing to open and in-depth conversations.

The final sample was appropriate and diverse regarding class, gender, and hometown, given the qualitative nature of the study, which prioritizes depth over breadth in exploring personal experiences (Creswell, 2013; Patton, 2015). In qualitative research, smaller sample sizes are permissible and appropriate for in-depth exploration of participants' perspectives, providing rich, detailed data that can reveal the complexity of individual experiences (Guest et al., 2006). This approach ensures that the focus remains on the nuances of each participant's story rather than seeking generalizability, as is common in quantitative research (Mason, 2010).

The final sample was diverse in terms of the gender ratio (8 males and 8 females), and interviewees coming from different northern and southern cities of China and not just limited to the popular immigrant southern cities such as Guang Dong/Hong Kong. Interviews took place in December 2024 over a one-month period of time.

### **3.4 Method: Semi-Structured Interviews**

I collected data through semi-structured interviews. Each interviewee participated in a semi-structured interview that was designed to take about 60 minutes to complete. Participants were encouraged to conduct in-person interviews in green spaces they regularly frequented, thereby situating the discussions within contextually meaningful environments in some cases that enriched reflections on their lived experiences. However, interviews were conducted either in person or via Zoom/phone, depending on participant preference, to ensure accessibility.

The interviews were guided by an interview protocol and the theories discussed in Chapter 2 that guided my research. Key topics covered included: "Meaning of green space to individuals," "Frequency and types of green space use," "Emotional and physical

impacts of green space engagement,” “Barriers to accessing green spaces,” and “Perceptions of how green spaces contribute to social inclusion and well-being.”

The interview guide questions can be found in Appendix D such as: “How often do you access green space in your daily life?” “What are your favourite green spaces in Victoria, and why?” “How do you feel physically and mentally after spending time in these green spaces that you mentioned and other green spaces?” and “What challenges have you encountered in accessing green spaces, and how did you overcome them?” All interviews were audio-recorded (with participant consent) and transcribed verbatim for analysis.

Although I did not initially provide participants with a strict definition of “green space,” at the beginning when we started the interviews, I noticed a recurring pattern during the interviews. After I read out the interview questions, many participants immediately associated “green space” with large, formal parks—such as Beacon Hill Park or other large-scale recreational areas. They tended to overlook smaller-scale green environments such as pocket parks, greenways, or community gardens located near their homes. When this occurred, I would reiterate that, in the context of this research, “green space” referred broadly to all types of accessible, vegetated areas, including both large municipal parks, and smaller neighborhood green spaces. This clarification often helped participants reflect on a wider range of green spaces in their daily lives.

### **3.5 Data Analysis**

This study employed thematic analysis following Braun and Clarke’s (2006) six-phase approach: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the final report. Interview transcripts were analyzed to identify recurring

patterns related to the meaning and significance of green spaces, participants' usage behaviors, perceived barriers, and contributions to their well-being.

While the analysis was primarily inductive, it was informed by a combination of theoretical and conceptual lenses. Place attachment theory served as a guiding analytical framework, shaping how I interpreted participants' emotional, cultural, and social bonds with specific green spaces. In contrast, intersectionality (Crenshaw, 1991) and environment justice were used as sensitizing concepts, orienting my attention to how overlapping identities such as race, gender, language, and immigrant status might shape access to green spaces and urban exclusion. These frameworks did not dictate the coding process but helped me remain critically attentive to structural inequalities and power dynamics embedded in participants' narratives.

This layered approach allowed me to remain grounded in participants' lived experiences while also attending to the broader sociopolitical contexts shaping their relationships with place, inclusion, and well-being.

### ***3.5.1 Transcription***

Digital recordings of the interviews were transcribed by Microsoft Word Transcribe and hand-checked for accuracy. All interviews were transcribed verbatim to capture participants' words accurately, as transcription is a critical step in qualitative analysis (Oliver et al., 2005). These transcriptions were coded to identify relevant themes that align with the research objectives (Bailey, 2008). These were transcribed in Mandarin first. Verbatim transcription ensures that the nuance of participant narratives is preserved for analysis (Halcomb & Davidson, 2006).

### 3.5.2 Coding

Interview transcripts, originally conducted in Mandarin, were transcribed and coded in their original language to preserve linguistic and cultural nuance. However, translating them from Mandarin to English came with both advantages and challenges. On the one hand, translation allowed findings to be shared with a broader academic audience, including supervisory committee members who do not speak Mandarin. It also made it possible to conduct thematic coding in a consistent format and align results with English-language scholarship.

On the other hand, language translation in qualitative research is never neutral—it involves interpretation (Squires, 2009; Van Nes et al., 2010). Some Mandarin expressions, idioms, and culturally situated meanings are difficult to render fully in English. For instance, phrases such as “草长莺飞”<sup>3</sup> evoke rich seasonal and emotional imagery that can lose meaning when translated literally. The deeper meaning includes homesickness in Chinese. Tone, humor, implicit critique, or cultural metaphors may be flattened or distorted (Rojas, 2015; Tang, 2000). Furthermore, linguistic differences in expressing respect, modesty, or indirectness, common in Chinese communication, may be underrepresented in English text (Chen et al., 2011; Zhang, 2024).

To mitigate these issues, I remained reflexive throughout the translation and analysis process, recognizing my dual role as both an insider and an outsider. As an insider, I shared cultural values, native language (Mandarin), and immigrant background with my participants, which helped establish rapport and a sense of trust. I was able to

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<sup>3</sup> 草长莺飞: cǎo zhǎng yīng fēi: the grass grows and orioles fly. It captures the liveliness and rebirth of spring, it is often used in Chinese classical poetry to evoke nostalgia and homesickness, especially when one is far from home during springtime.

understand nuanced expressions and cultural references that may not translate easily into English. At the same time, I also held an outsider position as a graduate student researcher working within an academic institution. I was younger than most participants and occupied a different stage of life and social role, which sometimes created a distance in how participants perceived me during interviews and interactions. This helped me preserve the authenticity of participants' voices while enabling cross-linguistic interpretation for academic reporting. As Temple and Young (2004) argue, cross-language research requires attention not only to meaning, but also to power and positionality embedded in translation choices.

Coding began with an inductive, line-by-line review to identify meaningful segments of data related to participants' experiences with green space. Initial codes were then reviewed, grouped, and refined into broader themes, following Braun and Clarke's (2006) thematic analysis framework. This process supported a systematic identification of patterns across interviews, while remaining grounded in participants' own words and cultural context. To protect confidentiality and recognize participants as active and engaged contributors, all names were replaced with pseudonyms (Allen & Wiles, 2016).

### ***3.5.3 Validation***

Next, the findings and outputs were translated into English and improved by Grammarly AI in order to avoid privileging the English language, to respect cultural sensitivities and to increase efficiency. I used Grammarly AI critically and selectively, not blindly accepting every suggestion. For instance, I wrote “维多利亚州的华裔老年移民指出了他们社区中最喜欢的几处绿地，强调了这些绿地在他们生活中发挥的不同作用，从放松和社交互动到文化联系和锻炼”，translated it to “Older Chinese immigrants in Victoria pointed out some favourite green spaces in their community, showing the

diverse roles these areas play in their lives, from relaxation and social interaction to cultural connection and exercise” first, and then I used Grammarly AI to improve this sentence to final version “Older Chinese immigrants in Victoria identified several favourite green spaces in their community, highlighting the diverse roles these areas play in their lives, from relaxation and social interaction to cultural connection and exercise.”

Another example is:

Step one: “此外，未来的研究还应该调查移民老人的性别和阶级差异，了解照顾责任、经济独立和社会支持网络等因素如何影响绿地参与度”。 Step two:

“Additionally, future research should investigate gender and class-based differences in immigrant seniors and see how things like caregiving responsibilities, financial independence, and social support networks shape green space engagement.” Step three:

“Additionally, future research should investigate gender and class-based differences among immigrant seniors, evaluating how factors like caregiving responsibilities, financial independence, and social support networks shape green space engagement.”

To ensure the accuracy of the findings, member checking was done in Mandarin and employed by sharing key themes and preliminary findings with 5 participants for their feedback (Birt et al., 2016). Member checking enhances the credibility and validity of qualitative research by allowing participants to confirm or challenge the interpretations made by the researcher (Lincoln & Guba, 1985). In this study, member checking was conducted through WeChat, a widely used communication platform among the participant group. In undertaking the member checking, I maintained contact with several older participants after the interviews and, upon completing initial thematic analysis, sent them brief summaries of key findings in simplified Chinese. Their responses then helped me in clarifying my interpretations, confirming the relevance of themes, and ensuring that their voices were accurately represented in the final analysis.

### **3.6 Conclusion**

This chapter has outlined the research design and methodological framework of the study, detailing the rationale for employing a qualitative, community-engaged approach centered on semi-structured interviews with Mandarin-speaking older Chinese immigrants. It has discussed ethical considerations, participant recruitment, data collection, and analysis strategies, while also reflecting on the researcher's positionality and insider status. These methodological choices were guided by the aim of capturing rich, culturally grounded narratives that illuminate the complex ways green spaces intersect with aging, migration, and identity. The next chapter presents the findings drawn from these interviews, organized thematically to reflect participants lived experiences and perspectives on green spaces in Victoria.

## **Chapter 4: Interacting with Green Spaces: Experiences of Older Chinese Immigrants in Victoria**

This chapter presents the findings from 16 semi-structured interviews conducted in Mandarin with older Chinese immigrants in Victoria, British Columbia between December 4<sup>th</sup>, 2024, and December 31<sup>st</sup>, 2024. Each interview lasted approximately 60 minutes, covering topics such as favourite green spaces, park preferences, the impact of green spaces on daily life, challenges in access and use, intergenerational and gendered differences, and changes in green space engagement before and after migration.

The participants included eight men and eight women, ranging in age from 57 to 80 years old. According to the Chinese retirement policy, the statutory retirement age is 55 for females, or 50 for female blue-collar workers, and 60 for their male counterparts (Che & Li, 2018). Older Chinese immigrants who were eligible to be included in this research were aged 55 years old and over. The retirement age standard in Canada, 65 years old, is higher than in China. Some interviewees immigrated to Canada after retiring in China, so they did not continue to work here and remain retired. Others came to Canada at a younger age, so they stayed working. Their regions of origin varied across northern China (e.g., DongBei, NeiMeng, XinJiang), southern China (e.g., HongKong, NanJing, ShangHai), and central China (e.g., HeNan province). Their educational backgrounds ranged from junior high school to postdoctoral degrees, and all participants had lived in Victoria for at least four years. According to income, participants' class backgrounds ranged from lower middle class to upper class<sup>4</sup>, with middle class being the most common

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<sup>4</sup> The income class are: \$40,000 per year and below, between \$40,000 and \$60,000 per year, over \$60,000 per year.

The following data were derived from the first part of the interview questions: Background/Profile Questions (Appendix D: Older Chinese Immigrants Participant Interview Questions). Educational immigrants<sup>5</sup> tended to belong to the middle class or higher. Skilled migrants (31.25%) often had a lower middle-class background. Spousal-sponsored immigrants<sup>6</sup> exhibit varied class backgrounds, from lower middle to middle class.

The majority of participants lived in houses (69%), while the rest resided in condos or townhouses. Homeownership was high, with 87% owning their residences. Notably, some participants lived with their children and grandchildren (43.7%), reflecting intergenerational cohabitation, a common cultural practice in Chinese families. Some participants lived with their spouse only (25%), while others lived alone (25%), and one participant lived with a roommate.

*Table 2: Living arrangement*

<b>Living Arrangement</b>	<b>Number of Participants</b>	<b>Percentage %</b>
Lives with spouse only	4	25
Lives with other generations	7	43.7
Lives alone	4	25
Live with one roommate	1	6.3
<b>Total</b>	<b>16</b>	<b>100</b>

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<sup>5</sup> Educational immigrants: They came to Canada for education purposes when they were around 20 to 40 years old.

<sup>6</sup> Spousal-sponsored immigrants: Individuals who obtain permanent residency in Canada through sponsorship by a Canadian citizen or permanent resident spouse or common-law partner, under the family reunification category of the Canadian immigration system.

Before discussing the main themes that emerged from the participants, it is important to understand or reflect on English language proficiency among the sample given the importance of such proficiency for helping older adult immigrants to be engaged meaningfully in the local context.

English proficiency levels varied significantly among participants. It was also a major theme in the following findings because language barriers were ubiquitous in the experiences of the interviewees. Fluent or very fluent (30%) speakers (IELTS<sup>7</sup> 6.5 or above) were mostly former educational immigrants, who can work and live independently and successfully in English, close to being a native speaker. Basic (40%) or no English (30%) proficiency (IELTS 5 and below) was more common among married and skilled migrants.

**Table 3:** *Language Proficiency and Integration*

<b>English Proficiency Level</b>	<b>Number of Participants</b>	<b>Percentage %</b>	<b>Common Immigration Type</b>
Fluent/ Very Fluent	5	30	Educational Immigrants
Basic	6	40	Skilled Immigrants
Not at all	5	30	Marriage/ Skilled Immigrants
Total	16	100	

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<sup>7</sup> The IELTS (International English Language Testing System) is a standardized English language proficiency test designed to assess the language ability of non-native English speakers who need to study, work, or migrate to countries where English is the language of communication. The test evaluates four language skills: Listening, Reading, Writing, and Speaking. Each section is scored on a 9-band scale, with the overall band score being the average of the four sections. A score of 9 indicates an expert user, while a score of 1 indicates a non-user.

Those who are fluent in English were more likely to be working or have had a skilled career in Canada, whereas those with limited language proficiency tended to be retired or unemployed. English language proficiency was assessed informally through our conversations and daily social, rather than a standardized test. Drawing from my personal experience, having taken the IELTS exam three times and undergone one-year IELTS training to pursue my master before coming to Canada, I was able to make a reasonably accurate estimation of each participant's English proficiency.

The majority (75%) were retired, with only a few still employed (12.5%) or unemployed (12.5%). Those who continue working tended to be younger (under 65) and have higher education levels (college or above). From a gender and economic independence perspective, men were more likely to have worked in skilled professions before reaching the standard age for retirement in Canada retirement. Women, particularly those who immigrated through marriage or family sponsorship, had lower employment rates and were more financially dependent on their families.

*Table 4: Employment and Retirement Trends in Canada*

<b>Employment Status</b>	<b>Male (%)</b>	<b>Female (%)</b>	<b>Total (%)</b>
Retired	62.5	87.5	75
Working	25	0	12.5
Unemployed	12.5	12.5	12.5
Total	100	100	100

This chapter is structured according to major themes that emerged from the second part of interview questions: Main Questions (Appendix D). The first section explored preferences for green spaces and the factors influencing these choices. The second section

examined the physical, mental, and social benefits of green space engagement. The third section highlighted the challenges participants faced, such as accessibility, language barriers, and safety concerns. The fourth section analysed changes in relationships with green spaces before and after migration, followed by a final section on intergenerational dynamics, gender differences, and urban gardening practices among participants. The major themes that emerged were: Influencing Factors on Preferences for Green Spaces, Benefits of Green Space Use, Challenges of Green Spaces Use, Comparison of Changes in Relationships with Green Spaces Before and After Migration, Intergenerational Relations in Green Spaces, and The Role of Green Spaces in Food Security and Urban Gardening.

Four overarching themes and several subthemes emerged from the data. Table 5 provides an overview of these themes, offering a visual summary of the major patterns discussed in the sections that follow.

**Table 5:** *Overview of Key Themes and Subthemes Identified in the Study*

<b>Themes</b>	<b>Subthemes</b>	<b>Participant Example Quote 1</b>	<b>Participant Example Quote 2</b>
Benefits of Green Space Use	Physical Health Benefits	“At my age, staying active is important. I visit green spaces mainly to walk because it keeps my legs strong. I notice that when I don't walk for a few days, my legs feel stiff, and I get tired more easily”	Walking in the park makes me feel younger, like my body is waking up”
	Mental Well-being and Stress Reduction	“Watching the flowers in Butchart Gardens makes me forget my worries for a while”	“Moving to a new country was difficult, but walking in parks reminds me of home. It helps me adjust”
	Social Well-being and	“Many Chinese seniors meet at Beacon Hill Park to chat, practice Tai Chi, or play	“My church group often meets at the park. We walk together, share food, and pray outdoors

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	Community Connection	chess. It reminds me of parks in China where older people gather. We don't feel like outsiders here"	when the weather is good. It's our way of keeping our faith alive in this new country"
Challenges of Green Space Use	Lack of Culturally Inclusive Spaces and Activities	"In China, parks are always full of people dancing, playing music, or doing Tai Chi together. Here, I don't see that as much, so I feel like I don't belong"	"I would go more often if there were group activities for seniors, like language-friendly walking groups or cultural events"
	Language Barriers	"Sometimes, I don't understand the rules in the park because everything is written in English. I worry that I might do something wrong, like picking flowers in the wrong place"	"I want to join some activities in the park, but they are all in English, so I don't understand what to do"
	Safety Concerns and Public Camping Issues	"I understand that they need a place to stay, but sometimes I see people using drugs in the park, and it scares me"	"I used to go to this park near my house, but now there are too many homeless people camping there. It makes me feel unsafe, so I stopped going"
	Insufficient Infrastructure and Age-Friendly Design	"I don't go to certain parks because there are no washrooms, or they are too far from where I walk"	"There aren't enough benches. I need to rest frequently when I walk"
Intergenerational Relations in Green Spaces		"Every afternoon, I take my grandson to the small park near our home. He plays on the swings while I watch him, and sometimes we sit together and talk. It reminds me of when I was a child	"I like to take my granddaughter to the park so she can learn about the trees and flowers. I tell her the names of the plants in Chinese and English, so she doesn't forget her roots"

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	playing outside with my grandparents in China”	
Food Security and Urban Gardening	“I grow bitter melon and Chinese chives because they are expensive or hard to find in stores here. Growing them, myself makes me feel more at home”	“After moving to Canada, I felt isolated. Gardening helped me feel connected to something familiar. It’s my way of making this new place feel like home”

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#### 4.1 Influencing Factors on Preferences for Green Spaces

Older Chinese immigrants in Victoria identified several favourite green spaces in their community, highlighting the diverse roles these areas play in their lives, from relaxation and social interaction to cultural connection and exercise. The most frequently mentioned locations included Beacon Hill Park, Butchart Gardens, Government House Gardens, oceanfront areas (such as Clover Point Beach), and neighbourhood parks. However, various factors shaped their preferences, including accessibility, cultural significance, environmental aesthetics, seasonal conditions, and infrastructure availability.

The selection of green spaces that people visited and appreciated was shaped by various personal and environmental factors. Some participants prioritized convenience and accessibility, while others valued cultural familiarity or aesthetic appeal. Additionally, seasonal weather patterns and the convenience of infrastructure accessibility affected usage frequency.

Even when participants had a strong desire to visit green spaces, transportation limitations often prevented them from doing so. Participants in this study expressed a clear preference for parks within walking distance or easily accessible by public transportation. Some seniors relied on their adult children to drive them, but this was not always feasible. Some participants said *“I go to the park closest to my home because I don’t drive*

*anymore. And taking the bus is inconvenient, especially if I have to transfer” (Participant 2, woman). Another one said “I would visit more often but taking the bus to get there is a hassle. If there were a direct route, I’d go more frequently” (Participant 11, woman).*

Many participants emphasized transportation difficulties as a key barrier to accessing larger, well-maintained green spaces such as Butchart Gardens and Beacon Hill Park. Some older immigrants who do not drive reported relying on public transit, which they found inconvenient for reaching their preferred parks. One participant explained *“It’s beautiful, but it’s far from where I live. The entrance fee is also not cheap, so I can’t visit as often as I’d like” (Participant 13, man). Another one said, “I want to go to Butchart Gardens more often, but taking the bus there takes too long, and I don’t have a car” (Participant 3, woman). For those living in suburban or less densely populated areas, the lack of nearby green spaces posed another challenge. One participant explained “There’s no park near my house, so I have to walk at least 15 minutes just to find a green space. If there were more small parks in the neighborhood, I would go more often” (Participant 12, woman).*

The environmental and aesthetic appeal of green spaces is another significant factor influencing preference. Many participants favored parks with scenic views, diverse vegetation, and water features. One participant described their preference for Butchart Gardens by stating, *“I buy an annual pass to visit multiple times a year. The flowers change with the seasons, and the Japanese and Italian gardens remind me of the beauty of structured green spaces” (Participant 9, man). Similarly, another participant emphasized the restorative qualities of waterfront areas, noting, “The ocean view at Clover Point is relaxing—it reminds me of the coastal areas in China” (Participant 11, woman).*

Seasonal conditions significantly influence green space engagement, particularly in Victoria, where rain and colder temperatures limit outdoor activities in the winter

months. One participant explained, *“I go to parks daily in summer, but in winter, I stay home because it’s too cold and wet”* (Participant 12, man). In summary, these findings highlight the importance of designing parks that are accessible, aesthetically appealing, and have some weather-adaptive infrastructures to meet the needs of older immigrant communities.

#### 4.2 Benefits of Green Space Use

Beyond recreation, green spaces provided significant health benefits for participants. Almost every participant affirmed that green space is accessed regularly in their lives, with 70% or more having some daily exposure to it. Many participants emphasized how parks help them stay physically active, reduce stress, and provide a sense of relaxation. Several participants used vivid Mandarin expressions to describe their emotional responses to spending time in green spaces, illustrating the strong cultural and sensory connections they associate with nature. For example, one participant said that walking in a nearby park made him feel “神清气爽 (shén qīng qì shuǎng),” which roughly translates as “refreshed in spirit and invigorated in energy.” Another participant described gardening as a way to feel “心旷神怡 (xīn kuàng shén yí),” meaning “a sense of mental clarity and deep contentment.” These expressions point to more than just physical relaxation—they reflect a cultural understanding of nature as a source of inner harmony and spiritual renewal.

Other participants used phrases such as “鸟语花香 (niǎo yǔ huā xiāng),” literally “birdsong and floral fragrance,” or “绿意盎然 (lǜ yì àng rán),” meaning “lush and full of greenery,” to describe the aesthetic joy of their surroundings. Some expressed a sense of peace using the idiom “悠然自得 (yōu rán zì dé),” which conveys being

calm, unhurried, and at ease with oneself. These expressions not only convey affective states but also highlight the culturally embedded meanings of green spaces within Chinese ways of seeing and being. Incorporating these terms adds layers of cultural depth to how participants make sense of their environment.

#### **4.2.1 Physical Health Benefits**

For many older immigrants, walking in parks and practicing Tai Chi were essential ways to maintain mobility, prevent age-related diseases, and stay active. Participants emphasized that aging in Canada presented new health challenges due to a more sedentary lifestyle compared to their past experiences in China. For many participants, regular walks in green spaces provided their primary form of exercise, helping them maintain joint mobility, balance, and cardiovascular health. Several interviewees emphasized the importance of walking for their overall fitness, particularly as they aged. One participant shared, *“I try to walk in the park every day. It helps me stay active, and I feel much better afterward”* (Participant 5, woman). Another stated, *“Since moving to Victoria, I feel like my body is healthier because I walk more and breathe in fresh air”* (Participant 11, woman). One participant said, *“At my age, staying active is important. I visit green spaces mainly to walk because it keeps my legs strong. I notice that when I don’t walk for a few days, my legs feel stiff, and I get tired more easily”* (Participant 1, woman). Another one said, *“The air here is fresh, much better than the polluted air in Chinese cities. Walking in the park makes me feel younger, like my body is waking up”* (Participant 2, woman).

Some participants engaged in structured physical activities such as Tai Chi, stretching exercises, and community dance gatherings, which provided both exercise and social engagement. One interviewee noted, *“In China, we always had public spaces for dancing. I’m happy that we can still do this in some parks here”* (Participant 8, man). Many participants felt that the natural environment helped slow down physical aging,

reinforcing research on green spaces as a preventative health resource for seniors (Ward Thompson, 2013).

#### ***4.2.2 Mental Well-being and Stress Reduction***

Beyond physical health, participants frequently described green spaces as sources of emotional relief and mental clarity. Several interviewees reported that visiting natural areas, particularly waterfront locations, helped them manage stress, anxiety, and feelings of isolation. One participant explained, *“Whenever I feel stressed, I take a walk by the waterfront. The sound of the waves makes me feel at peace”* (Participant 3, woman). Another remarked, *“Watching the flowers in Butchart Gardens makes me forget my worries for a while”* (Participant 9, man). One participant said, *“Walking in the park is my meditation. It clears my mind and makes me feel at ease. When I first moved to Canada, I felt very stressed, but nature helped me calm down”* (Participant 8, man). Another one said, *“I enjoy watching the birds and flowers. It brings me peace, something I never had back in China’s busy cities. There is a different kind of quietness here”* (Participant 9, man).

Several participants specifically mentioned that parks helped them cope with the stress of migration. One participant stated, *“Moving to a new country was difficult, but walking in parks reminds me of home. It helps me adjust”* (Participant 12, woman). Another explained, *“I feel less isolated when I go to the park because I see other people, even if I don’t talk to them”* (Participant 14, woman). This finding aligns with studies suggesting that green spaces function as transitional spaces for immigrants, providing comfort and familiarity in a new environment (Sugiyama et al., 2018). These natural areas help bridge the gap between past and present by easing cultural adjustment. As accessible, neutral zones, green spaces provide opportunities for reflection, emotional healing, and

social interaction, making them supportive environments for both mental well-being and community integration.

#### **4.2.3 Social Well-being and Community Connection**

For many older Chinese immigrants, green spaces also serve as vital hubs for social interaction, helping to prevent loneliness and foster a sense of belonging. Several participants described how parks facilitated informal gatherings, cultural exchange, and intergenerational bonding. One interviewee shared, *“Every Sunday, a group of us gathers at the park to talk and drink tea. It reminds me of my old neighbourhood in China”* (Participant 7, man). Many seniors used public parks as social venues, where they recreated familiar cultural activities such as Tai Chi, square dancing, and group conversations: *“Many Chinese seniors meet at Beacon Hill Park to chat, practice Tai Chi, or play chess. It reminds me of parks in China where older people gather. We don’t feel like outsiders here”* (Participant 13, man). *“My church group often meets at the park. We walk together, share food, and pray outdoors when the weather is good. It’s our way of keeping our faith alive in this new country* (Participant 15, woman)”

Community gardens and urban parks often serve as important settings for immigrants to form social connections and ease cultural adaptation (Charles-Rodriguez et al., 2023). Immigrants engaging with nature in these spaces can reconnect with familiar activities from their home countries and build new “embodied” memories, helping foster a sense of belonging and continuity in their new environment (Calogiuri et al., 2023). *One participant said, “Beacon Hill Park is great because there are other Chinese seniors there. Sometimes we do group exercises or just chat”* (Participant 1, woman). Many older Chinese immigrants value social engagement in parks, often participating in group activities such as Tai Chi, dancing, and communal gatherings. Green spaces serve as

essential health resources, enhancing physical fitness, mental stability, and social inclusion for older Chinese immigrants.

### **4.3 Challenges of Green Spaces Use**

While green spaces provide numerous benefits for older Chinese immigrants, participants also identified several challenges that limit their engagement. These barriers include a lack of culturally inclusive activities, transportation difficulties, language barriers, safety concerns, entry fees, and inadequate infrastructure. Such challenges not only affect accessibility but also impact the extent to which green spaces contribute to participants' well-being and social integration.

#### ***4.3.1 Lack of Culturally Inclusive Spaces and Activities***

For many participants, green spaces in Victoria felt less socially engaging compared to those in their hometowns in China. In China, parks often serve as community hubs, where seniors gather for Tai Chi, group dancing, chess, and cultural performances. Several participants expressed a desire for more culturally relevant programming and gathering spaces tailored to Chinese seniors. Some noted that they felt disconnected from local parks because there were fewer opportunities to engage in familiar activities. One participant stated: *“In China, parks are always full of people dancing, playing music, or doing Tai Chi together. Here, I don’t see that as much, so I feel like I don’t belong”* (Participant 9, man). Another explained: *“I would go more often if there were group activities for seniors, like language-friendly walking groups or cultural events”* (Participant 5, woman).

### **4.3.2 Language Barriers**

Beyond physical accessibility, language barriers emerged as a significant challenge affecting participants' ability to navigate parks, understand rules, and engage in community activities. Many parks in Victoria provide only English-language signage and programming, which created uncertainty and hesitation among non-English-speaking seniors. One interviewee explained: *"Sometimes, I don't understand the rules in the park because everything is written in English. I worry that I might do something wrong, like picking flowers in the wrong place"* (Participant 7, man). Another participant noted how language barriers limited their ability to participate in guided walks or events: *"I want to join some activities in the park, but they are all in English, so I don't understand what to do"* (Participant 11, woman).

These findings align with research indicating that language proficiency is a crucial factor in public space engagement for immigrant seniors (Dabelko-Schoeny et al., 2021). Studies suggest that parks with multilingual signage, interpretation services, and community outreach in multiple languages experience greater participation from older immigrants (Li & Marshall, 2020; McDermott, 2012). Implementing Chinese-language signs, multilingual park maps, and culturally tailored programming could help reduce these linguistic barriers and improve green space accessibility for older immigrants.

### **4.3.3 Safety Concerns and Public Camping Issues**

In addition to accessibility challenges, perceived safety issues were a major concern for participants, particularly regarding homeless encampments, public drug use, and crime near parks. While green spaces provided opportunities for relaxation, several participants reported feeling unsafe in specific areas, which discouraged them from visiting parks alone or at certain times of the day. One participant expressed discomfort

when visiting parks that had become temporary shelters for homeless individuals: *“I used to go to this park near my house, but now there are too many homeless people camping there. It makes me feel unsafe, so I stopped going”* (Participant 4, man). Another one said, *“I understand that they need a place to stay, but sometimes I see people using drugs in the park, and it scares me”* (Participant 8, man). Another one explained: *“Lately, I’ve noticed more homeless people camping along the waterfront. It makes me feel uneasy, especially in the evenings”* (Participant 12, woman).

These concerns reflect broader urban challenges related to housing insecurity and public safety which are complex issues in Canada generally, and in BC (British Columbia Poverty Reduction Coalition, n.d.; Government of British Columbia, n.d.; HeretoHelp BC, n.d.). Also, these concerns are consistent with research showing that older adults often avoid parks that are perceived as unsafe due to the presence of marginalized populations or poor maintenance (Maas et al., 2009; Sugiyama & Ward Thompson, 2007). The impact of perceptions of safety on park use underscores the need for urban policies that ensure equitable access while addressing concerns related to homelessness and park security (Maier, 2024). Perceived safety issues, whether due to crime, homelessness, or drug-related activity, can significantly deter older adults from using public green spaces, even when those spaces are well-maintained (Piroozfar et al., 2019). Addressing these concerns requires multi-sectoral policy interventions, including dedicated spaces for homeless shelters, improved park security, and community-driven solutions that balance inclusivity with safety (Bradford, 2005).

#### ***4.3.4 Insufficient Infrastructure and Age-Friendly Design***

Infrastructure limitations were another frequently cited barrier. Many participants pointed out the lack of benches, rest areas, and public restrooms as obstacles that made it difficult for them to use parks for extended periods. Many participants emphasized the

need for additional seating, accessible restrooms, and multilingual signage to improve their park experiences. One interviewee remarked, *“There aren’t enough benches. I need to rest frequently when I walk”* (Participant 14, woman). Others shared frustration about limited restroom facilities: *“I don’t go to certain parks because there are no washrooms, or they are too far from where I walk”* (Participant 2, woman).

These concerns reflect broader findings that green spaces designed with age-friendly infrastructure, such as well-maintained pathways, shaded seating areas, and accessible restrooms, are more frequently used by older adults (Bedimo-Rung et al., 2005). The relationship between green spaces and social equity is further reinforced by research indicating that inclusive and accessible green environments contribute to stronger public health outcomes in diverse communities, particularly those with historical exclusion from such amenities (Jennings et al., 2024). Furthermore, studies indicate that the presence of multilingual signage enhances accessibility for immigrant seniors and encourages greater engagement with public parks.

#### **4.4 Comparison of Changes in Relationships with Green Spaces Before and After Migration**

Migration brings profound changes in the ways individuals engage with their surrounding environments, particularly green spaces. Older Chinese immigrants in Victoria experienced significant transformations in their relationship with parks and natural settings after relocating to Canada. Before migration, participants’ interactions with green spaces were limited, structured, and often influenced by urban density, cultural expectations, and accessibility constraints. After migration, they encountered greater freedom and accessibility, leading to new patterns of use, shifts in environmental perceptions, and evolving emotional connections to nature. This section explores how

participants' relationships with green spaces evolved, examining their previous experiences in China, their adjustment to Canadian parks, and how their perspectives on nature and environmental conservation changed over time.

#### ***4.4.1 Limited Access and Structured Green Space Use Before Migration***

Many participants described having fewer opportunities to engage with green spaces in China, particularly in urban areas where parks were scarce, overcrowded, or restricted. Several interviewees recalled that parks were mainly used for specific activities, such as morning exercises for seniors or as scenic destinations for family outings, rather than for everyday relaxation or exercise. One participant explained: *“In my hometown, green spaces were not as open as they are here. Parks were always crowded, and we had to share limited space with many people”* (Participant 6, man). Another participant described how access to parks was often dependent on social status or residential location: *“When I lived in China, I rarely went to green spaces because they were far from my home. Many parks were gated or required entrance fees, so they were not easily accessible to everyone”* (Participant 9, man).

For some participants, interactions with green spaces before migration were limited to rural environments or agricultural work rather than recreational use. One interviewee noted: *“Before coming to Canada, my connection to nature was through farming. We didn't go to parks for leisure like people do here—we worked in the fields”* (Participant 12, woman). This distinction between working with nature versus experiencing nature for leisure highlights a key cultural shift that occurred after migration. While Chinese urban parks were structured spaces with specific uses and restrictions, participants found that green spaces in Canada offered greater freedom for unstructured leisure and relaxation.

#### ***4.4.2 Expanded Access and New Patterns of Use After Migration***

After migrating to Canada, participants reported greater access to green spaces, more frequent park visits, and a shift in how they viewed nature and recreation. Many described appreciating the abundance of parks, the lack of entrance fees, and the ability to use green spaces freely without restrictions. One participant reflected: *“Here, I can go to the park anytime I want. There is no need to worry about fees or too many people. It feels more relaxing and open”* (Participant 3, woman). Another noted the difference in how Canadians engage with green spaces compared to their experiences in China: *“In China, parks are always full of activity—people dancing, singing, or playing music. But here, parks are quieter. People come to walk, sit, or enjoy nature peacefully”* (Participant 10, woman).

For many older immigrants, green spaces in Canada also became places for self-reflection, solitude, and mental well-being—a contrast to the highly social nature of park use in China. One participant described how their emotional relationship with nature deepened after migration: *“In Canada, I started to see green spaces as a place for peace and thinking. Back home, I never used parks in this way”* (Participant 14, woman). These shifts in perception suggest that green spaces in Canada serve multiple roles beyond socialization for older immigrants; they also become places for self-reflection, emotional healing, and personal growth. Participants adapted their park usage based on their evolving needs and new cultural contexts.

#### ***4.4.3 Environmental Perceptions and Sustainability Practices***

Several participants noted that their attitudes toward nature and environmental conservation changed after moving to Canada. Some reported that they had never thought about environmental protection before migration, but living in Victoria influenced their

sustainability awareness: *“In China, I didn’t think much about protecting nature, but here, I see people caring for the environment, and I try to do the same.”* (Participant 10, woman). Others started practicing recycling and waste reduction after noticing community efforts in Canada. For instance, one participant noted, *“In the parks here, I see signs about recycling and keeping the area clean. It makes me more careful about littering”* (Participant 8, man).

A few participants compared Canadian environmental policies with China, offering perspectives on different approaches to sustainability. *“In China, there are more rules about keeping parks tidy, but here, people seem to follow the rules naturally.”* (Participant 13, man). Migration influences environmental awareness, reinforcing the idea that exposure to different cultural norms can reshape individuals’ relationships with sustainability. The presence of environmental education, signage, and public initiatives in Victoria contributed to participants’ adoption of eco-friendly behaviours.

#### ***4.4.4 Adapting to a Different Cultural Relationship with Green Spaces***

Despite these newfound freedoms, some participants initially struggled with adapting to a different cultural approach to green space use. Some reported feeling disoriented by the quieter, more individualistic nature of park use in Canada, where structured activities and large social gatherings were less common. One participant shared: *“At first, I found it strange that people in Canada don’t gather in parks as much as in China. I missed the social energy of the parks back home”* (Participant 8, man). For some, this cultural shift created feelings of isolation: *“I used to go to the park to be around people, even if I didn’t talk to them. Here, the parks are beautiful, but sometimes I feel lonely when I walk alone”* (Participant 5, woman).

However, others found new ways to engage with green spaces, such as forming walking groups or attending community events. One participant described how they

gradually adjusted to a Canadian style of park use: *“Now, I enjoy going to the park for quiet walks. I’ve also joined a local group of Chinese seniors who meet in the park every week”* (Participant 2, woman). These findings support studies suggesting that immigrant seniors navigate a cultural transition in their use of green spaces, often balancing their traditional habits with new recreational opportunities in their host country (Jay & Schraml, 2014). However, challenges such as cultural differences in park use and feelings of social isolation initially created barriers to engagement. Strategies such as community-led park programs, culturally relevant events, and multilingual outreach could help bridge the gap between immigrant seniors’ past and present relationships with green spaces, fostering a sense of continuity and belonging as well as health and well-being in their new environment.

#### **4.5 Intergenerational Relations in Green Spaces**

Green spaces play a vital role in shaping intergenerational relationships and gendered patterns of park use among older Chinese immigrants in Victoria. Many participants described green spaces as essential locations for spending time with grandchildren, reinforcing cultural heritage, and fostering cross-generational bonds. However, differences in physical abilities, caregiving responsibilities, and social roles influenced how these spaces were used. Several participants emphasized the role of green spaces in facilitating intergenerational relationships, particularly through activities involving grandchildren. Many older Chinese immigrants in Victoria take on caregiving roles, and green spaces serve as a key setting for spending time with younger family members, engaging in recreational play, and passing down cultural traditions.

One participant explained: *“Every afternoon, I take my grandson to the small park near our home. He plays on the swings while I watch him, and sometimes we sit together and talk. It reminds me of when I was a child playing outside with my grandparents in*

*China*” (Participant 3, woman). Another participant described how green spaces serve as a bridge between generations, allowing older and younger family members to share experiences and interact with nature: *“I like to take my granddaughter to the park so she can learn about the trees and flowers. I tell her the names of the plants in Chinese and English, so she doesn’t forget her roots”* (Participant 11, woman). For many families, parks and green spaces are also preferred alternatives to indoor play spaces, providing opportunities for physical activity while fostering cultural and linguistic connections between generations. These findings align with research suggesting that parks can serve as culturally relevant spaces for immigrant families to sustain intergenerational ties and cultural heritage (Cerin et al., 2021).

However, some participants expressed challenges in engaging in intergenerational activities due to physical limitations or language barriers with younger generations. One participant noted: *“I wish I could play more with my grandchildren in the park, but my knees hurt, so I just sit and watch. Sometimes they get bored because they want to run around”* (Participant 12, woman). This highlights the importance of age-friendly infrastructure in parks, including seating areas and accessible pathways, to ensure that older adults can fully participate in intergenerational activities.

#### **4.6 The Role of Green Spaces in Food Security and Urban Gardening**

Many participants expressed a strong cultural and personal connection to gardening, viewing it not just as a recreational activity but as a practical means of supplementing their diets, maintaining traditions, and fostering community relationships. This section explores the motivations, challenges, and social aspects of how green spaces are used for food production among Chinese immigrant seniors in Victoria.

#### **4.6.1 Green Spaces as Functional Food Sources**

Many participants described using their private gardens, shared community spaces, or even small patches of public green space for cultivating food. Several interviewees had previous agricultural experience in China, where growing vegetables and herbs was common practice, and they continued this tradition after migration. One participant explained: *“In China, we always grew our own food—vegetables, herbs, and even rice in some areas. Here, I don’t have a big piece of land, but I still grow some Chinese vegetables in my backyard”* (Participant 4, man). Another participant shared how green spaces allow them to access fresh, familiar produce that is difficult to find in local supermarkets: *“I grow bitter melon and Chinese chives because they are expensive or hard to find in stores here. Growing them, myself makes me feel more at home”* (Participant 10, woman). For many seniors, gardening provides a sense of food security, allowing them to supplement their diets with culturally significant produce while also maintaining control over food quality.

#### **4.6.2 Community Gardens and Social Bonds**

Beyond individual home gardens, several participants expressed interest in community gardening programs, highlighting how shared green spaces can serve as social hubs for immigrant seniors. However, some participants were unaware of local urban gardening initiatives or faced barriers in accessing community garden plots. One interviewee shared their desire to participate in community gardening but noted language and administrative barriers: *“I would love to join a community garden, but I don’t know how to apply. The process seems complicated, and everything is in English”* (Participant 5, woman).

Another participant explained how community gardening fosters social interactions and intergenerational connections: *“I go to the community garden with my granddaughter. She helps me plant, and I teach her about the vegetables we used to eat in China. It’s a way to pass down our traditions”* (Participant 10, woman). Expanding culturally tailored urban gardening programs could improve social inclusion, food security, and overall well-being for Chinese seniors in Victoria.

#### **4.6.3 Cultural and Emotional Significance of Gardening**

For many older Chinese immigrants, gardening is not just about food, it is deeply connected to cultural identity, nostalgia, and emotional well-being. Several participants described gardening as a therapeutic activity, linking it to memories of home and past experiences in China. One participant reflected on the emotional comfort gardening provides: *“When I work in the garden, I feel peaceful. It reminds me of my childhood in the countryside, where my parents grew vegetables. It’s like bringing a piece of my past into my life here”* (Participant 12, woman). Another participant described how gardening helped them cope with loneliness and stress after migration: *“After moving to Canada, I felt isolated. Gardening helped me feel connected to something familiar. It’s my way of making this new place feel like home”* (Participant 8, man).

#### **4.6.4 Challenges and Barriers to Gardening in Green Spaces**

Despite the many benefits, participants also reported several challenges in utilizing green spaces for gardening. Some participants noted that waiting lists for community garden plots were long, making it difficult to find space. Others mentioned that community garden rules (e.g., restrictions on plant types or usage) sometimes conflicted with their traditional gardening practices. One participant noted, *“I applied for a garden plot, but they told me I have to wait for years. I wish there were more spaces for seniors*

*like me to grow food” (Participant 14, woman). Many seniors were unaware of available gardening initiatives or found the application process difficult due to language barriers. One participant said, “heard there are community gardens, but I don’t know where to go or who to ask. Everything is in English, so I don’t understand” (Participant 1, woman).*

A few participants expressed concerns about plants being stolen or tampered with in public green spaces. One participant said, *“One time, I planted some vegetables in a small open area, but someone took them before I could harvest. It was very frustrating” (Participant 2, woman).* Some participants found that local regulations prohibited gardening in certain green spaces, making it difficult to find appropriate areas for cultivation. *Another one said, “I tried growing vegetables in a public park, but they told me I wasn’t allowed. I don’t understand why, since it’s not harming anyone” (Participant 11, woman).* These challenges highlight the need for more inclusive and accessible urban gardening policies, particularly for older immigrants who rely on gardening for food security, socialization, and emotional well-being.

#### **4.7 Conclusion**

This chapter has presented the thematic findings that emerged from interviews with 16 older Chinese immigrants in Victoria, shedding light on their preferences for green spaces, perceived benefits, challenges to access, and the evolution of their engagement with nature before and after migration. It has also explored intergenerational dynamics, gender differences, and the role of urban gardening in shaping a sense of place and identity. These findings reveal both the opportunities green spaces offer for promoting well-being and the structural barriers that constrain full participation. The next chapter engages in a critical discussion of these themes, situating them within existing literature and the employed theoretical frameworks to derive broader insights and policy implications.

## **Chapter 5: Discussion and Conclusion**

This research explored the impact of green spaces on the well-being of older Chinese immigrants in Victoria, BC. By addressing a critical gap in the existing literature, this study explored and provided insights into how green spaces can be utilized to promote physical health, mental well-being, and social inclusion among an often-overlooked population (Jennings et al., 2016; Lo & Jim, 2010). Furthermore, these findings have value for informing policymakers and urban planners on the importance of creating inclusive, immigrant-friendly spaces that foster community connection and enhance quality of life and well-being for aging immigrant populations. The findings from this study revealed that green spaces play a multifaceted role in the lives of older Chinese immigrants in Victoria, providing not only opportunities for physical activity and social interaction but also serving as spaces of cultural continuity, emotional connection, and adaptation to life in Canada. Participants' engagement with green spaces was shaped by a

complex interplay among considerations of accessibility, cultural expectations, past experiences, and structural barriers.

### **5.1 Cultural Adaptation and Use of Green Spaces**

For older Chinese immigrants, migration to Canada brought significant changes and transformations in participants' relationships with green spaces (Peters et al., 2010; Tossutti, 2023). While many participants appreciated the open, well-maintained, and widely available green spaces in Victoria, they also shared key differences in how parks were used. Their preferences for green space align with broader research on urban green space usage among immigrant seniors, particularly in Western countries where cultural adaptation intersects with urban planning and health outcomes (Byrne & Wolch, 2009; Lo & Jim, 2010).

In China, parks often function as vibrant community hubs, where older adults gather for group exercises, social activities, and intergenerational interaction (Wan, 2024; Xie et al., 2018). In contrast, participants found Canadian parks to be quieter and more individualistic, which, while offering moments of solitude and relaxation, also created feelings of disconnection and loneliness for some. So, green spaces that incorporate traditional design elements or mimic familiar landscapes from immigrants' home countries have been found to enhance their sense of belonging and well-being (Lo & Jim, 2010). Despite these initial challenges, many participants adapted their engagement with green spaces over time, developing new routines and finding alternative ways to foster a sense of belonging (Espinoza et al., 2024).

### **5.2 Barriers to Access and Equity in Green Spaces**

Access to green spaces was not equal for all participants, with factors such as transportation limitations, language barriers, cost at times, and safety concerns shaping

how and when they could visit parks (Barbosa et al., 2007). Public transit difficulties were a major barrier for non-driving seniors, particularly for those living in suburban areas with fewer nearby parks. Older adults are more likely to use green spaces within a 500-meter radius of their residence (Schipperijn et al., 2010; Kabisch et al., 2016). Individuals from Asian backgrounds were particularly likely to gravitate toward parks that are located in neighbourhoods where more Chinese older immigrants had settled, as these spaces offer a sense of cultural familiarity and social support.

Research has also shown that proximity to green spaces is one of the strongest predictors of park usage among older adults, and that transportation barriers disproportionately affect immigrant seniors, who may be less familiar with transit systems or lack access to private vehicles, and where English language barriers are also problematic (Lin et al., 2024; Zhang et al., 2025). Park features and accessibility impact immigrant engagement, with well-designed parks promoting higher satisfaction and usage, particularly among ethnic minorities and marginalized groups (Roberts et al., 2019). Urban planners could increase green space accessibility by creating smaller, walkable community parks in residential areas and improving public transit routes to major green spaces (Mauldin et al., 2023).

Seasonal weather patterns are also a major determinant of park use among older adults, with higher visitation rates observed in warmer months (Cohen et al., 2007). Some participants suggested that covered rest areas or indoor community spaces could encourage year-round engagement, which aligns with urban planning recommendations for weather-resilient or adaptive green space design, such as heated shelters and covered walkways (Ward Thompson, 2013). Language barriers further compounded accessibility challenges, making it difficult for some participants to understand park signage, navigate green spaces, or participate in community events (Lewicka, 2011). Additionally, safety

concerns related to homelessness and public drug use deterred some from visiting certain parks, particularly older women, who felt vulnerable in less monitored environments. A potential solution includes better lighting, increased security patrols, and designated "safe zones" for seniors (Nasar & Jones, 1997; Pain, 2000; Foster et al., 2016). These structural barriers reveal the hidden exclusions within public spaces, emphasizing that while green spaces may appear universally accessible, they may also not be equally inclusive for all users.

### **5.3 Health Benefits, Intergenerational Connections, and Cultural Continuity**

Some participants further confirmed that green space is extremely important to their physical and mental health. Green spaces are associated with higher physical activity levels among older adults, which in turn helps prevent cardiovascular diseases, obesity, and musculoskeletal decline (Lopez-Haro et al., 2024; Kondo et al., 2018). Walking in natural environments contributes to better circulation, lower blood pressure, and improved lung function due to cleaner air and reduced exposure to pollutants (Twohig-Bennett & Jones, 2018).

These findings also support theories of restorative environments, which suggest that natural settings help reduce stress and promote mental relaxation (Lee & Lee, 2019). Research has demonstrated that exposure to green spaces is associated with lower levels of depression, anxiety, and psychological distress, particularly among older adults (Tan et al., 2019). For immigrant seniors, green spaces may be especially beneficial in reducing acculturative stress and promoting emotional stability (Andreucci et al., 2019).

Urban green spaces serve as gathering places where immigrants can build social networks, engage in recreational activities, and maintain cultural traditions, contributing to enhanced social cohesion and community ties (Jennings et al., 2024). Studies also suggest that designing parks with multilingual signage, including traditional Chinese gardens, and

programming tailored to cultural preferences can increase engagement among immigrant seniors (Cerin et al., 2019; U.S. Department of Health and Human Services, 2007).

Intergenerational interactions within green spaces were a significant theme, as many older Chinese immigrants play active caregiving roles for their grandchildren. Green spaces are important sites for strengthening familial bonds, engaging in cross-generational learning, and passing down cultural traditions, as grandparents mentioned teaching younger generations about nature, language, and heritage through shared outdoor experiences (Fang et al., 2023; Kaplan & Haider, 2015; Rigolon et al., 2015). However, some participants faced challenges in fully engaging with their grandchildren in green spaces, citing physical limitations or language gaps that made communication and play more difficult. These findings are consistent with other literature that suggests that age-friendly infrastructure, such as adequate seating, shaded areas, and accessible paths, are essential to supporting intergenerational engagement in green spaces (Adlakha et al., 2021; Salmistu & Kotval, 2023).

Beyond recreation, green spaces also held functional and cultural significance for participants, especially in relation to urban gardening and food security (Diekmann et al., 2020; Souza et al., 2019). Many older Chinese immigrants had strong backgrounds in agriculture or home gardening, and they sought to continue these practices in Victoria. Gardening in community spaces provided a sense of self-sufficiency, cultural preservation, and social connection, but barriers such as long waiting lists for garden plots, language restrictions, and zoning policies limited participation (Shan & Walter, 2015; Tsu, 2013). These findings suggest that expanding culturally tailored gardening initiatives and ensuring equitable access to community green spaces could enhance not only food security but also social inclusion for immigrant seniors (He & Zhu, 2018; Taylor & Lovell, 2015).

#### 5.4 Recognizing Intersecting Identities in Green Space Engagement

Although this study did not formally adopt intersectionality as a theoretical framework, participants' narratives reveal the importance of recognizing how multiple social identities—such as age, gender, language, education, income and immigration status—interact to shape their engagement with green spaces. Drawing on the concept of intersectionality (Crenshaw, 1991) at this stage helps contextualize the compounded barriers experienced by older Chinese immigrants and offers a more layered understanding of access and exclusion.

For example, several participants mentioned how language proficiency intersected with aging-related mobility challenges to deter participation in community-based outdoor activities. These experiences mirror findings by Koehn et al. (2013), who argue that health inequities among ethnocultural minority elders in Canada are rooted in overlapping systems of structural discrimination shaped by race, gender, and age.

An intersectionality lens also clarifies generational tensions that influence green space engagement. As Chung (2006) notes, older Chinese adults who prioritize collectivism and outdoor socialization may feel alienated when their adult children favor work commitments or Western ideals of independence. These intergenerational dynamics were reflected in the accounts of participants who described feeling spatially and emotionally isolated, even within family units.

Design and programming of green infrastructure often overlook these nuanced realities. Scholars such as Rigolon et al. (2021) and Jennings et al. (2024) critique dominant planning paradigms that cater to white, middle-class users while neglecting the spatial needs of marginalized populations. Participants' comments about the lack of Mandarin-speaking facilitators, culturally appropriate gathering spaces, and language-accessible programming align with these critiques.

In this sense, integrating an intersectional perspective into the discussion offers more than just explanatory power, it points to ethical imperatives for inclusive urban design. Acknowledging these intersecting identities helps resist the tendency to generalize older adults' experiences and instead centers the complex and diverse realities faced by immigrant seniors navigating public green space in Canada.

### **5.5 Summary of Key Findings**

Overall, my findings emphasize that green spaces are deeply embedded in the migration experience, serving as both sites of continuity and transformation. While many participants found comfort, familiarity, and well-being in Victoria's green spaces, others faced structural barriers that restricted full engagement. The study underscores the importance of designing urban green spaces that are inclusive, accessible, and culturally responsive and relevant, recognizing that parks are not just physical landscapes but also social and cultural environments that shape the well-being, social inclusion and integration of immigrant seniors (Edge et al., 2023; Gao et al., 2020; Hordyk et al., 2015). Addressing the identified barriers, through improved transportation, language-accessible programming, enhanced safety measures, and culturally tailored initiatives—could foster more inclusive and welcoming green spaces that truly serve the diverse needs of older Chinese immigrants in Victoria.

The findings in this study challenge the assumption that public green spaces are universally accessible and affirm that parks are shaped by power, culture, and belonging (Enssle & Kabisch, 2020; Liu et al., 2021; Peter, 2010). For many older Chinese immigrants, green spaces are not merely recreational—they are extensions of home, identity, and social life (Rishbeth, 2001; Wen Li et al., 2010; Zhang & Gobster, 1998). Yet without intentional design and planning, these spaces risk reinforcing exclusion rather than promoting equity (Braubach et al., 2017; Rigolon et al., 2021).

Green spaces can become vehicles for healing, restoration, and connection—particularly for those who have experienced dislocation through migration, aging, or systemic discrimination (Bikomeye et al., 2021; Rigolon et al., 2022). Policymakers must recognize that inclusion is not just about physical access, but about cultural relevance, emotional safety, and symbolic belonging. Addressing these dimensions of equity is key to creating age-friendly and immigrant-inclusive cities. Gender equity must also be foregrounded by ensuring that the distinct needs and experiences of older women and men are addressed in urban design and public programming.

### **5.6 Strategic Recommendations for Urban Planners and Policymakers**

Designing green spaces with older adults in mind is key to supporting healthy aging in cities. Research on age-friendly communities finds that the availability of safe, accessible outdoor spaces (e.g. parks with walking paths, benches, and good upkeep) correlates with better self-rated health and lower functional limitations among seniors (Choi Y, 2020). For instance, one study showed that the likelihood of good quality of life in older adults rose when they had nearby parks of adequate size and facilities, and it dropped as walking distance to the nearest green space increased (Yu et al., 2024). Recognizing these benefits, urban planners and gerontologists have proposed senior-friendly park design guidelines (e.g. ensuring flat, well-maintained pathways, ample seating and shade, safety lighting, and exercise stations) to make parks inviting and usable for older adults (Lee et al., 2022).

Urban planning strategies need to incorporate more direct bus routes for seniors (Rosenbloom, 2004; Litman, 2021), include cultural sensitivity training for bus drivers, enhance park safety measures, and alignment with studies on age-friendly city planning (Van Cauwenberg et al., 2018). Such age-conscious planning aligns with the World Health Organization's Age-Friendly Communities framework, which calls for clean,

secure green spaces and walkable outdoor environments that enable older residents to remain active, socially engaged, and independent (WHO, 2007). Age-friendly park improvements not only boost seniors' physical and mental health but also facilitate intergenerational social interaction, benefiting the broader community.

Equitable access to green space is increasingly seen as a social determinant of health that also promotes quality of life. Urban parks and greenery can act as “social glue,” bringing together residents of different backgrounds and fostering social cohesion and inclusion (Jennings & Bamkole, 2019). Studies indicate that positive interactions in shared green spaces build social capital and trust among neighbors, catalyzing a sense of belonging and community that enhances well-being inclusion (Jennings & Bamkole, 2019). At the same time, green spaces offer venues for leisure and exercise that can reduce stress and improve mental health, contributing to individuals' overall life satisfaction. A 2016 systematic review concluded that green spaces provide intertwined social, psychological, and environmental benefits – from facilitating social support networks to encouraging physical activity and contact with nature – which collectively improve people's physical and emotional well-being and thereby raise quality of life (Mensah et al., 2016).

However, studies also warn that unequal distribution or poor quality of green space in certain neighbourhoods can undermine these benefits. For example, if lower-income or marginalized groups have fewer local parks, they miss out on the social and health benefits that more privileged communities enjoy, widening gaps in well-being (Yu et al., 2024). Promoting social inclusion through urban greening thus involves not only creating parks and gardens but ensuring everyone can access them. Cities that prioritize green space availability in all districts (e.g. through pocket parks, green corridors, community gardens in underserved areas) tend to report higher overall community satisfaction and

social cohesion (Bhandari, 2023; Clarke et al., 2023). In summary, accessible green spaces contribute to a more inclusive city and better quality of life, whereas closing the “green gap” between communities is an important policy step toward health equity and social well-being for all urban residents.

In combination with the study’s findings and the research literature, the following core and to some extent overlapping recommendations are proposed to improve urban green space planning and policy development to better serve older immigrant communities:

*1. Recommendation 1: Enhance Transportation Infrastructure*

- Establish direct, frequent public transportation routes linking residential areas and major parks.
- Introduce shuttle services designed specifically for senior populations, offering easy and convenient park access.
- Add some Chinese signs or QR codes that can be voice-announced at bus stops.

*2. Recommendation 2: Increase Park Safety Measures*

- Enhance lighting and visibility: Install well-distributed lighting in large urban parks (e.g., Beacon Hill Park) and along main trails in regional parks, especially near restrooms and entry/exit points. In small neighborhood parks and pocket parks, prioritize open sightlines and minimize obstructive vegetation to increase perceived safety.
- Install surveillance infrastructure: Consider placing security cameras in high-traffic areas of major public parks to deter crime and enhance monitoring, while ensuring signage clearly communicates their purpose to avoid discomfort among users.

- Establish routine security patrols: Implement scheduled patrols—especially during early mornings and evenings—in both large and small parks located near residential areas with higher immigrant or senior populations.
- Create community-based park stewardship teams: Form volunteer groups involving immigrant elders to co-monitor and co-maintain local parks. These teams can partner with local community policing initiatives to respond to safety concerns in culturally responsive ways.
- Balance enforcement with inclusion: In parks frequented by unhoused populations, ensure that safety policies avoid displacement. Instead, support collaborative solutions such as harm-reduction outreach, inclusive signage, and conflict de-escalation training for city staff and park stewards.

### 3. *Recommendation 3: Culturally Responsive Park Design and Programming*

- Support affordable and accessible language classes: Municipal governments and community organizations should invest in low-cost or free English language programs tailored to older immigrants. Language proficiency not only enhances communication and social participation but also builds confidence in navigating public spaces such as parks, recreation centres, and community events.
- Implement multilingual signage in all types of green spaces: Rather than limiting multilingual features to a few “ethnic” parks, city planners should incorporate signage in multiple languages—including Mandarin, Punjabi, Tagalog, and others based on local demographics—across all public parks, trails, and gardens. This can include maps, safety information, plant names, and event announcements.

- Move beyond symbolic multiculturalism: Cultural inclusion should not be confined to specific enclaves (e.g., Chinatown). Urban planning must recognize that immigrant communities live throughout the city and deserve inclusive design in all public environments. This includes culturally relevant seating areas, gathering spaces, and visual representations that reflect the city's full diversity.

#### *4. Recommendation 4: Age-Friendly Park Infrastructure*

- Develop infrastructure improvements such as flat walking paths, accessible restrooms, clean washrooms through regular consultations with senior communities to address specific physical needs.
- Add shaded seating areas and rest stops within reasonable distances (e.g., every 500 meters) in large parks.
- Recognize the diversity of green space types that are meaningful for older immigrants, including not only large municipal parks but also small neighborhood gardens, riverside paths, and culturally significant spaces such as the Gorge Pavilion or the Chinese Cemetery. Include space for collective activities such as Tai Chi plazas and covered pavilions.
- Consider how accessibility to green spaces can be approached holistically—beyond physical infrastructure—by ensuring spatial equity, transportation links, and cultural relevance across multiple neighborhoods, rather than concentrating efforts in one designated senior-friendly area.
- Incorporate culturally resonant green spaces into planning by consulting with immigrant communities about the symbolic and emotional meanings attached to certain locations, which may not be recognized in mainstream urban design but hold deep value for social connection and well-being.

5. *Recommendation 5: Support and Expand Community Gardening Programs*

- Simplify the application and administrative processes for community gardens.
- Expand plot availability specifically targeting immigrant senior communities and other low-income groups who can benefit from improved access to food security measures.
- Offer multilingual gardening workshops and culturally relevant gardening resources and host cultural food-growing exchanges. For example, the University of Victoria has significant green space in land where gardens could potentially be implemented. Students can also participate and interact with seniors.

6. *Recommendation 6: Intergenerational Initiatives Using the AFLE Model (Age-Friendly Living Ecosystem)*

- Establish areas within parks equipped with amenities suitable for both older adults and younger individuals, encouraging shared activities such as Tai Chi sessions, dance classes, and storytelling events (e.g., Tai Chi mornings followed by children's storytelling).
- Develop community gardens where older Chinese immigrants can share traditional horticultural practices with younger generations, fostering cultural exchange and mutual learning.
- Organize workshops that allow older immigrants to share cultural traditions, arts, and crafts with the broader community, promoting understanding and respect across age groups, such as seasonal cultural festivals or environmental clean-up days.
- Create programs where tech-savvy youth assist older adults in developing digital skills, enabling better navigation of online resources related to green

space activities and community events (e.g., youth teach digital skills; elders share cultural heritage and gardening knowledge).

- Partner with local schools and community centers to facilitate regular intergenerational programs that make use of green spaces.

*7. Recommendation 7: Flexible and Low-Cost Access to Recreational Facilities*

- Introduce time-based access schemes or fee waivers or reductions for seniors over 65 to indoor and outdoor recreational amenities.
- Provide multi-ethnic booking opportunities for community facilities to encourage cross-cultural interaction while ensuring spaces for cultural-specific gatherings.

These recommendations align with current municipal and provincial priorities, including the City of Victoria’s Seniors’ Action Plan and the Province’s 2025 Mandate Letters. The city can build on the BC Ministry of Health’s emphasis on improving seniors’ care by integrating health-promoting green spaces into neighbourhood planning. It can also coordinate with the Ministry of Environment and Climate Change Strategy to prioritize accessible parks and green infrastructure that support aging immigrant populations. In partnership with the Ministry of Tourism, Arts, Culture and Sport, the city can activate cultural programming within public parks to foster inclusion and community engagement. Additionally, incorporating the anti-racism and equity mandates outlined by the Ministry of Citizens’ Services can help ensure culturally responsive park design that reflects the needs and experiences of diverse communities.

Implementation should be community-led, with Chinese seniors and other immigrant groups being actively involved in co-design, consultation, and feedback processes. This ensures that initiatives not only reflect cultural preferences but also build trust and social inclusion. A practical starting point could be a pilot program in Beacon

Hill Park or Government House Gardens, testing culturally inclusive features and evaluating their impact over time. Pilot programs should also consider gender representation, including women-only exercise groups or intergenerational gardening activities that accommodate both grandmothers and grandchildren.

### **5.7 Research Limitations**

While this study offers valuable insights into the relationship between green space and the well-being of older Chinese immigrants, several limitations must be acknowledged. This study focuses on Victoria, British Columbia, a city with unique social, cultural, and geographical characteristics that may not be representative of other urban contexts in Canada. Victoria's mild coastal climate, relatively small population, and historically significant Chinese community shape how older Chinese immigrants experience and engage with local urban green spaces.

These contextual factors may limit the transferability of the findings to other Canadian cities, especially those with different climatic conditions, urban forms, and demographic compositions. While the study provides in-depth insights into a specific setting, caution must be exercised when applying its conclusions to broader populations or policy contexts. Although the gender ratio in terms of participants was relatively balanced, the study did not explicitly examine the experiences of diverse older immigrants who might identify as non-binary or LGBTQ+ seniors. Instead, the research focused on predominantly cis gender, heterosexual perspectives.

Participants were recruited through community organizations and snowball sampling, which may have led to a sample of more socially engaged and mobile seniors, potentially overlooking the experiences of the most isolated or marginalized individuals. Additionally, the timing of data collection in the winter months may have influenced participant responses by emphasizing recollections of summer activity or indoor

alternatives. Conducting interviews in Mandarin allowed participants to express themselves more naturally and share culturally nuanced experiences that may have been difficult to articulate in English. The researcher's shared linguistic and cultural background further facilitated trust-building and deeper interpretation of narratives.

However, the exclusive use of Mandarin also presents limitations: the findings may not represent the views of all Chinese immigrants, or specifically those who speak other dialects or prefer English, and the translation process from Mandarin to English may still have risked losing subtle meanings or culturally embedded expressions. These linguistic and methodological considerations underscore the importance of reflexivity, cultural competence, and place-based insight when working with immigrant populations in qualitative research.

Finally, while my positionality as an insider-researcher provided cultural access and interpretive depth, it may have introduced unintentional bias despite my efforts to remain reflexive and transparent throughout the research process. These limitations highlight the need for broader, more inclusive studies that incorporate a range of linguistic, regional, gender, and socio-economic experiences across immigrant senior populations.

## **5.8 Conclusion**

This thesis examined the complex and nuanced role of green spaces in promoting the well-being of older Chinese immigrants in Victoria, British Columbia. Through qualitative interviews, the research highlighted the profound importance of green spaces in supporting physical health, mental wellness, social inclusion, cultural continuity, and intergenerational connections among older Chinese immigrant participants. Importantly, the study revealed that for many older Chinese immigrants, green spaces represent not only sites for leisure and recreation but also culturally meaningful environments that foster

a sense of identity, belonging, and emotional resilience in the context of immigration and aging.

Adopting a social dimensions of health framework, this research uncovered how multiple intersecting factors, including cultural practices, language barriers, socio-economic status, transportation accessibility, and urban infrastructure, shaped older immigrants' experiences of urban green spaces. Here, intersectionality functioned as a critical lens for understanding how layered identities, such as age, race, gender, language, and immigration status, combine to influence access to public space. It became clear that green spaces are not neutral or universally beneficial but are experienced differently depending on these social positionalities. Safety concerns, linguistic inaccessibility, and urban design that does not reflect cultural diversity frequently emerged as barriers that reduced meaningful engagement with parks and gardens.

The analysis was further informed by place attachment theory, which provided a powerful framework for interpreting participants' emotional bonds with specific green spaces. Many older immigrants described these environments not just as physical places but as affective landscapes where memories, routines, and a sense of continuity with both past and present were maintained. These attachments were critical in building resilience, cultural identity, and a sense of home in a new country.

Additionally, environment justice, particularly those grounded in cultural safety and spatial equity, shaped the study's call for inclusive, equity-oriented planning. By framing access to green spaces as a matter of social and environmental justice, this research emphasizes the ethical responsibility of planners and policymakers to ensure that immigrant seniors are not marginalized in the design and allocation of public resources.

Hence, one of the most significant contributions of this study is its illumination of voices that are too often overlooked: older Chinese immigrants who, despite living in

Canada for years or decades, remain socially and spatially invisible in many aspects of public life. In official narratives, Canada frequently promotes multiculturalism as a core national value. Yet in practice, urban environments—including parks and green spaces—are often designed and maintained according to dominant cultural assumptions that implicitly marginalize immigrant seniors. Their everyday experiences, language needs, and cultural expectations are rarely and insufficiently considered in the planning of public spaces that are supposedly “for everyone.”

Although Canada officially promotes a multicultural national identity, participants’ experiences suggest a disconnect between multiculturalism as a public discourse and the lived realities of immigrant communities. Public green spaces are often celebrated as inclusive and universally accessible, yet for many older Chinese immigrants, barriers such as language, signage, cultural unfamiliarity, and non-inclusive design persists. The presence of a few culturally-themed parks or events is sometimes seen as tokenistic rather than reflective of systemic inclusivity. The findings support broader critiques that Canadian multiculturalism often emphasizes symbolic recognition without adequately transforming institutional practices or urban design (Abu-Laban & Gabriel, 2002; Bannerji, 2000). In this context, green space planning that genuinely reflects multilingual, multigenerational, and intercultural needs is not merely aesthetic but a form of social justice.

Also, these findings underscore the necessity for intentional, culturally inclusive urban planning and policymaking. Recommendations developed from this study include enhancing transportation services, improving multilingual signage and park facilities, creating culturally relevant recreational programming, and promoting age-friendly and gender-sensitive infrastructure. Additionally, facilitating intergenerational activities and

urban gardening initiatives can effectively bridge cultural gaps, fostering stronger community ties among immigrant seniors and their families.

This study challenges the perceived and felt invisibility of older immigrants by centering their lived experiences in a domain where they are typically unheard. It offers an in-depth, culturally grounded understanding of how these individuals engage—or struggle to engage—with their environments in health-promoting ways. The participants' reflections reveal that access is not just about physical infrastructure, but also about emotional belonging, cultural recognition, and linguistic inclusion.

My position as a younger, Mandarin-speaking researcher with a Chinese cultural background played a vital role in this visibility-making process. I was not only able to communicate in the participants' preferred language but also to build the kind of relational trust that allowed for honest, nuanced storytelling. Many of the narratives shared with me—about fear, disconnection, and subtle forms of exclusion—might never have surfaced in a standard English-language interview conducted by someone perceived as a cultural outsider. Thus, the methodology itself became an ethical and political act of making visible what is typically hidden.

In doing so, this research goes beyond identifying barriers. It demonstrates how meaningful inclusion must begin with listening—to those at the margins, in their own words, through their own cultural frames. It argues that visibility is not symbolic representation in multicultural showcases, but the ongoing recognition of people's full humanity in everyday policy and design. This is where public health, urban planning, and social equity intersect—and where future work must continue to grow.

Although this research offers significant insights, limitations such as the small, geographically confined sample and potential self-selection bias must be acknowledged. Further studies should explore the experiences of other immigrant groups and racialized

seniors to understand their relationships with green spaces. Comparative research can inform intersectional planning that addresses diverse needs. Participatory action research and community-based design should be prioritized, involving immigrant seniors as co-researchers and co-creators of solutions. Additionally, future research should investigate gender and class-based differences among immigrant seniors, evaluating how factors like caregiving responsibilities, financial independence, and social support networks shape green space engagement. Research should also assess how intergenerational interactions in green spaces affect cultural continuity and psychological well-being.

In sum, this thesis contributes to a deeper understanding of how urban green spaces can become powerful tools for social inclusion, health equity, and cultural affirmation. It highlights the critical role urban planners, policymakers, and community leaders play in shaping cities that value diversity and inclusiveness. By embedding intersectionality, justice, and place attachment into the heart of urban green space planning, Victoria, and cities more broadly, can foster vibrant communities where older immigrants not only age healthily but also feel genuinely at home.

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## Appendix A: Certificate of Ethics Approval



**University  
of Victoria**

Office of Research Services | Human Research Ethics Board  
Michael Williams Building Rm B202 PO Box 1700 STN CSC Victoria BC V8W 2Y2 Canada  
T 250-472-4545 | F 250-721-8960 | [uvic.ca/research](http://uvic.ca/research) | [ethics@uvic.ca](mailto:ethics@uvic.ca)

### Certificate of Approval

PRINCIPAL INVESTIGATOR: <b>Denise Cloutier</b> (Supervisor)	<b>ETHICS PROTOCOL NUMBER: 24-0409</b>
PRINCIPAL APPLICANT: <b>JiaRui Zhu</b> <b>Master's student</b>	Expedited review - delegated
UVIC DEPARTMENT: <b>Geography GEOG</b>	ORIGINAL APPROVAL DATE: 02-Dec-2024
	APPROVED ON: 02-Dec-2024
	APPROVAL EXPIRY DATE: 01-Dec-2025
PROJECT TITLE: <b>Investigating the Impact of Green Spaces on the Well-being of Older Chinese Immigrants</b>	
RESEARCH TEAM MEMBERS: <b>None</b>	
DECLARED PROJECT FUNDING: <b>None</b>	
DOCUMENTS INCLUDED IN THIS APPROVAL: tcps2_core_certificate.pdf - 21-Sep-2024 recruitment poster.01.png - 26-Sep-2024 Interview questions (include Background Questions&#xff09;.doc - 25-Oct-2024 approval to use secondary data.pdf - 25-Oct-2024 consent form.doc - 25-Oct-2024 BVU approval of promotion.pdf - 25-Oct-2024 VIRCS approval of promotion.pdf - 25-Oct-2024 UBC Ethics Approval Certificate August 2023.pdf - 30-Oct-2024 D8M1-1.docx.pdf - 22-Nov-2024 using data permission.pdf - 28-Nov-2024	
<b>Conditions of approval</b>	
This Certificate of Approval is valid for the above term provided there is no change in the protocol.	
<b>Amendments</b> To make changes to the approved research procedure in your study, please submit "Amendments" or "Annual renewal with amendments" form. You must receive research ethics approval before proceeding with your amended protocol.	
<b>Renewals</b> Your ethics approval must be current for the period during which you are recruiting participants or collecting data. To renew your protocol, please submit a "Request for Renewal" form before the expiry date on your certificate. You will be sent an emailed reminder prompting you to renew your protocol about six weeks before your expiry date.	
<b>Project Closures</b> When you have completed all data collection activities and will have no further contact with participants, please notify the Human Research Ethics Board by submitting a "Notice of Project Completion" form.	
<b>Certification</b>	
This certifies that the UVic Human Research Ethics Board has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria's policies for research involving human participants.	
Dr. Sandra Gibbons Chair, Human Research Ethics Board	Dr. Cindy Holder Vice-chair, Human Research Ethics Board

## Appendix B: Participant Consent Form



### *Participant Consent Form*

[Public Health and Social Policy]

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#### **Investigating the Impact of Green Spaces on the Well-being of Older Chinese Immigrants**

You are invited to participate in a study entitled *Investigating the Impact of Green Spaces on the Well-being of Chinese Senior Immigrants* that is being conducted by JiaRui Zhu.

As a graduate student, I am conducting research as part of the requirements for my Master of Science program named Social Dimensions of Health in the Department of Public Health and Social Policy at the University of Victoria. This research is being conducted under the supervision of Denise Cloutier, who can be contacted by e-mail at [dcloutier@uvic.ca](mailto:dcloutier@uvic.ca).

#### **Purpose and Objectives**

This study will explore the experiences of older Chinese immigrants and their use of green spaces in Victoria, BC, Canada. The aim is to investigate the impact of green spaces on the well-being of older Chinese immigrants within a Canadian multicultural context.

#### **Importance of this Research**

Research of this type is important because the proposed study will increase awareness of the challenges that older Chinese immigrants face while accessing to green spaces. The study will help municipal policymakers better empower inclusive Communities for older Chinese Immigrants.

#### **Participants Selection**

You are being asked to participate in this study because you are an older Chinese immigrant in Victoria, BC, Canada. In addition, you are being asked to participate in this study as you may be able to reflect and share experiences, perceptions, perspectives and challenges of green spaces.

#### **What is Involved**

If you consent to voluntarily participate in this research, your participation will include an in-person or Zoom-based interview that should take about 30-60 minutes to complete. In addition, with your consent and permission, the interview will be recorded to create transcriptions for purposes of data analysis.

### **Inconvenience**

Participation in this study may cause some inconvenience to you, specifically the time it takes to complete.

### **Risks**

We do not have any major risks to you by participating in this research. However, we understand that some of our questions might be difficult, especially if you discuss potential negative experiences as you reflect on your experiences, and after completing the interview. Please note that you are welcome to let us know if you wish to withdraw during and after completing the interview. To address the risk of emotional upset or stress, I will approach our interview in an empathetic and non-judgmental way. I will not pressure you to speak about an experience that you are not comfortable sharing.

### **Benefits**

Potential benefits associated with participation in this research include the opportunity for participants to engage in self-reflection regarding their experience, perceptions and challenges with accessing and using green spaces. In addition, this research will draw upon your own experiences to assist in developing academic and social strategies to enhance the social environment and community for older Chinese immigrants.

### **Voluntary Participation**

Your participation in this research is completely voluntary. If you decide to participate, you may choose to skip any questions or withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will not be used in analysis and will be destroyed.

### **Anonymity**

Snowball sampling may introduce risks to participant confidentiality, as existing participants refer potential new participants, potentially compromising anonymity. I will safeguard your information, there may be inherent limitations due to the recruitment method. I allow you to opt out of referring others if you're uncomfortable. This protects you from feeling pressured to involve others.

In terms of protecting your anonymity, the data collected by the researchers will be anonymized with an assigned subject code that will be stored separately. The results of

the study will contain some information of you like gender and age, but your confidentiality will be protected. We will be asking you a list of initial profile interview questions which is only meant to help me create a demographic table that will be used to illustrate the diversity of older Chinese immigrants who participated in our study in terms of their gender identity, educational status, income-class, time in Victoria. We will be asking you a list of semi-structured interview questions which will be used for the purposes of helping me understanding and discuss your experiences as an older Chinese immigrant. I do not plan to share any personal identification or names from the list of profile questions or the semi-structured interviews in the report or scholarly works. Pseudonyms will be used in writing my thesis and in other reports, discussions of any interview responses you provide to me.

### **Confidentiality**

Your confidentiality and the confidentiality of the data will be protected as the interview recordings and transcripts data will be anonymized with an assigned subject code that will be stored in my research folder on my secured one drive, and it will be password protected for access only by me. Consent forms will also be stored in my research folder in my one drive, and it will be protected for access only by me on my laptop computer.

### **Dissemination of Results**

It is anticipated that the results of this study will be shared in the form of a presentation at conference meetings, publications in academic journals and book chapters, thesis, dissertation, class presentation, internet, media, and directly to participants and/or groups involved.

### **Disposal of Data**

Electronic Data from this study will be erased and field notes will be shredded two years from when the data was collected.

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or [ethics@uvic.ca](mailto:ethics@uvic.ca)).

Your signature below indicates that you understand the above conditions of participation in this study either in person or via Zoom meeting, and that you have had the opportunity to have your questions answered by the researchers, and that you consent to participate in this research project.

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*Name of Participant*

*Signature*

*Date*

***A copy of this consent will be left with you, and a copy will be taken by the researcher.***

## **Appendix C: Older Chinese Immigrants Recruitment Poster**

### **Investigating the Impact of Green Spaces on the Well-being of Chinese Senior Immigrants**

[UVIC, BVU, VIRCS]

#### **RESEARCH PARTICIPANTS NEEDED**

This research is aimed to investigate how urban green spaces contribute to the well-being of Chinese senior immigrants in Victoria, British Columbia.

#### **I am looking for participants with the following:**

Chinese immigrants who have Permanent Residence in Canada, aged 55 years old and above, speaking Mandarin.

#### **If you answered YES**

This will have to be very clear and detailed. Please see the ethics site for examples that you can use. You will be asked to have one 30-60 minutes interview, and then one 3-hours digital storytelling workshop (if you would love to). In appreciation of your time, we offer one \$10-\$20 worth of gift card.

If you are interested in participating in this study, or would like more information, please contact:

JiaRui Zhu-Student at University of Victoria

School of Public Health and Social Policy

Email: [jjarui@uvic.ca](mailto:jjarui@uvic.ca)

Phone number: 778-678-6180

This research study has been reviewed and approved by University of Victoria Research Ethics Board [24-0409].

## Appendix D: Participant Interview Questions



### Participant Interview Question

[Public Health and Social Policy]

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#### Investigating the Impact of Green Spaces on the Well-being of Older Chinese Immigrants

##### SEMI-STRUCTURED INTERVIEW GUIDE

##### Background/Profile Questions:

1. How long have you lived in Victoria?
2. How do you self-identify in terms of gender identity?
3. How might you self-identify in terms of educational background and income level?
4. Where do you live?
5. How long have you lived in this area?
6. Do you live alone or live with others? If you live with others, how many individuals do you live with and what is their relationship to you?

##### Main Questions:

7. What are your favorite green spaces in Victoria? And can you explain why?
8. What green spaces are available in your neighborhood/community?
9. How often do you use them? How do you use them? With whom?
10. After using green spaces, how do you feel physically and mentally? And what about before using green spaces?
11. Do you think green spaces contribute to your health? How?
12. What factors affect your ability to access green spaces? Like weather, public transportation, finance...
13. Can you describe any negative and positive experiences you have had related to green spaces?
14. What challenges have you accessed green spaces resources? And how did you solve these challenges?
15. How important is it for you to have green spaces in your life after immigrating to Canada?
16. Have your relationships to green spaces changed in importance before and after migration? If so, how and why?

17. What actions do you think your community and Victoria municipal policymakers could take to enhance and expand inclusive communities through green spaces for older Chinese immigrants?

18. What recommendations do you have for your community and Victoria municipal policymakers to better improve its efforts on green spaces that would help your wellbeing more positive?