

Exploration of the Active Aging Renewal Model in Double-Aging Communities

from the Perspective of Sense of Place

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Abstract

Chinese communities are currently facing the dual challenges of aging infrastructure and an aging population. Many renewal projects for "double-aging communities" often prioritize modern and intelligent design methods, as well as standardized elderly facilities and services, while neglecting the emotional needs and creative participation of older adults. This has deepened the stereotype of elderly individuals as a "passive and disadvantaged group," rendering them mere "observers" and "burdens" within the community. As a result, the sense of place among older adults has weakened, leading to social isolation and a decline in community cohesion.

This study focuses on the "Neighbouring Courtyard" renovation project in Silicon Valley Pioneer Community, located in Xisanqi Street, Haidian District, Beijing, completed in 2023. Initially built in 1996, approximately 20% of the community's population is now over 60, significantly exceeding the United Nations' 10% threshold for entering an aging society. Prior to the renovation, the community faced issues such as outdated environmental facilities, weak community culture, and low resident participation. The project deviates from traditional community renewal methods, embracing a positive aging approach that effectively addresses the emotional and spiritual needs of elderly residents, thereby enhancing community cohesion.

This research aims to analyse design strategies and methods corresponding to the sense of place needs of older adults within community renewal efforts. It seeks to explore models of inclusive development and the preservation of community memory through active aging.

Employing qualitative research methods, this study collected data on older adults' perceptions and suggestions regarding community renewal through site observations, surveys, and in-depth interviews. A total of five field explorations were conducted, yielding 132 valid survey responses and in-depth interviews with 20 elderly residents. The research gathered insights into the emotional identity development, design preferences, social participation, and interactions of older adults within the community from the perspective of sense of place, followed by detailed analysis.

The findings reveal that, due to changes in life circumstances such as retirement and children's independence, older residents have more time to engage in community life and express stronger emotional attachments to their community compared to younger age groups. They possess valuable social experiences and hold a deeper understanding of community development, desiring to actively participate in various stages of community building and activities. The project fully respects the opinions and needs of older adults by employing a co-creation model, fostering a multi-layered courtyard structure that integrates essential living, neighbourly interaction, and health services. Interactive installations and cultural elements that reflect the memories of the older generation, such as a smile collection station and phenology exhibition area, were

incorporated to stimulate their enthusiasm and creativity.

These innovative designs enhance older adults' sense of place and belonging, effectively deepening emotional connections within the community. This research illustrates a model of positive aging renewal for double-aging communities from the perspective of sense of place. It recommends challenging the bias that views aging and older adults as wholly negative factors, advocating for active aging strategies in the renovation of aging communities to better meet the sense of place needs of older populations and encourage their active role in inclusive community development.

Keywords

Double-aging Communities, Positive Aging, Community Renewal, Sense of Place Theory

1. Introduction

Population aging is a global phenomenon that is increasingly affecting all regions of the world (Harper, 2014). It is projected that by 2050, 16% of the global population will be over 65 years old, with 80% of elderly individuals living in low- and middle-income countries (World Population Prospects 2024). China currently has the largest elderly population in the world and is undergoing rapid aging (National Bureau of Statistics). As of 2023, over 21% of China's population is aged 60 and above, and over 15% is aged 65 and above. It is expected that by around 2050, the elderly population in China will peak at 487 million, accounting for 34.9% of the total population (National Bureau of Statistics). This aging rate significantly exceeds the global average, posing substantial challenges associated with high levels of aging (Chen *et al.*, 2022).

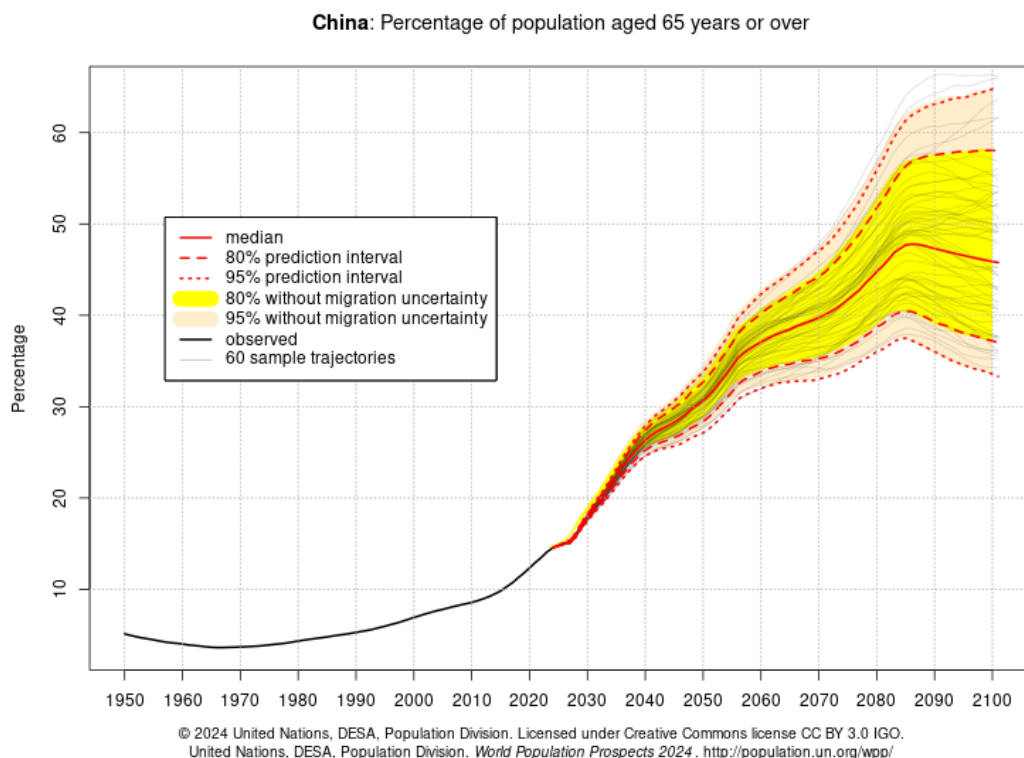


Figure 1. China: Percentage of population aged 65 years or over. Source: World Population Prospects 2024.

As the elderly population continues to grow, older adults often face challenges such as health decline and difficulties in adapting to technology (Partridge, Deelen and Slagboom, 2018). With the acceleration of social change and rapid urban development, the living conditions of older individuals have become increasingly precarious. Social structures and policies frequently fail to fully recognize the potential of the elderly, who are often defined as consumers of resources rather than contributors (Georgios, 2023). This perspective marginalizes their social roles, pushing them further toward social exclusion (Burholt et al., 2020). Such negative views not only limit opportunities for elderly participation in society but also exacerbate feelings of social isolation and reduce their quality of life, undermining social equity and cohesion (Niedzwiedz *et al.*, 2016). Therefore, addressing how to improve the age-friendly social system, create livable environments for older adults, dismantle stereotypes and age discrimination, and encourage active social participation among the elderly is an urgent issue that needs to be considered (Swift *et al.*, 2017; Levy, Lytle and Macdonald, 2022).

Influenced by shifts in social identity and activity capacity, most older adults conduct their primary daily activities within their communities. As the fundamental unit of social governance in China, communities serve as essential spaces for the well-being of the elderly. Therefore, the transformation of communities to be more age-friendly is urgently needed (Tang, 2015).

Currently, most urban communities in China were established in the 1980s and 1990s, and they generally suffer from insufficient and aging public spaces and infrastructure, as well as a lack of thoughtful landscape design (Wei, 2012). Coupled with an aging homeowner demographic and a significant increase in the elderly population, many old communities overlap with aging communities, resulting in a “double-aging” characteristic marked by both population aging and infrastructure decline (Chen *et al.*, 2022). Within these double-aging communities, the needs of older adults for public leisure spaces and emotional connections to their communities are often unmet, presenting unique challenges and opportunities for community development, governance, and urban renewal (Yang *et al.*, 2023).

2. Literature Review

2.1. International Positive Aging Initiatives

In recent years, the concept of age-friendly cities has gained increasing attention (Torku, Chan and Yung, 2021). Various international organizations have proposed numerous initiatives and practices aimed at addressing the challenges of global population aging. In 2015, the United Nations adopted the 2030 Sustainable Development Goals (SDGs), emphasizing the needs of older adults in areas such as social security, health services, and equal opportunities. Since 2015, the Organisation for Economic Co-operation and Development (OECD) has advocated for policy innovations in aging societies, promoting employment support for older adults, lifelong learning, and reforms to pension systems. In 2011, the European Union launched the European Innovative Partnership for Active and Healthy Ageing (EIP-AHA) initiative. The goal of this initiative is to promote the community application of smart health technologies for the elderly, while promoting interaction between different age groups and strengthening community support systems. The World Health Organization (WHO) initiated the Age-Friendly Cities and Communities program in 2007, focusing on creating age-friendly environments across eight dimensions: infrastructure, transportation, housing, and social participation, among others. The International Federation on Aging (IFA) has long been dedicated to global elderly welfare and health initiatives, addressing social isolation through multi-stakeholder collaboration and advocating for global pension policy reforms. The shared goal of these organizations is to create a safer, healthier, and more inclusive environment for positive aging through

technological innovation, policy reform, and social inclusion, ensuring that older adults can play active roles in society(*Global age-friendly cities: a guide*, n.d.).

As the fundamental unit of Chinese society and the primary activity space for older adults, communities have become important pilot sites for positive aging practices in China(Wang, 2024). To address the double-aging challenges in communities, China has implemented a series of policies and practical measures. The "14th Five-Year Plan for National Aging Development and Pension Service System" (2021) proposes the age-friendly renovation of old communities, including the installation of barrier-free facilities and elevators to enhance the convenience of life for older adults (Yang *et al.*, 2023) (National Development and Reform Commission, 2021). The "Guidelines for the Construction of Age-Friendly Communities (Trial)" (2021) outlines specific construction requirements related to spatial layout and activity spaces (Ministry of Housing and Urban-Rural Development, 2021). Simultaneously, the government aims to improve community service efficiency through grassroots governance and smart platforms, encouraging older adults to participate in community development, supporting senior service stations, and integrating medical and elderly care services to ensure health management and rehabilitation care (Ministry of Civil Affairs, 2022).

2.2. Positive Aging Practices

Traditional age-friendly models primarily focus on providing necessary living support and services for older adults, such as housing modifications and improved transportation accessibility, ensuring that they can live safely and comfortably in familiar environments(Yang and Wang, 2024). Currently, age-friendly renovations in China mainly emphasize improving the living conditions and meeting the physiological needs of older adults, with a focus on enhancing residents' quality of life and the overall development of cities(Li, 2024). These approaches often employ standardized and uniform design techniques for elderly care services and facilities, concentrating on material improvements in the external environment and physical care for older adults(Jiao, 2024). However, there is often a lack of substantial communication regarding residents' grassroots needs, especially for older adults, who are often viewed as a "vulnerable group needing care." Their emotional needs and active participation are frequently overlooked, leading them to become passive observers in community development or even viewed as "negative factors." This results in weakened interpersonal relationships and a lack of emotional connection to the community, hindering the establishment of a positive cultural ecosystem within the community(Georgios, 2023; Yang *et al.*, 2023).

As we all know, with the development of society, the problem of population aging is becoming more and more serious. As a result, the existing community pension model has been unable to meet the diverse needs of the elderly. In this context, the concept of "active aging" has received more and more attention worldwide. The core objective of this concept is to create a healthy and active living environment for older persons, which covers physical health, social participation and cultural activities(McNeil-Gauthier, Milot and Levasseur, 2024).

The strategy of "active aging" progressive significance is that it not only focus on the elderly's health, more emphasis on the importance of social participation for old age. As for the specific measures to promote active aging, many scholars have conducted research. Fitzgerald and Caro (Fitzgerald and Caro, 2014), believe that the successful implementation of active aging policies must fully consider the characteristics of the local level and adapt to local conditions to meet the different needs of the elderly. (Aldrich and Meyer, 2015) also mentioned that social capital and support networks in communities are critical to driving active aging. In addition, a large number of studies have shown that increased social activities and community involvement have a significant impact on improving mental health and life satisfaction in older adults (Bertelli-Costa and Neri, 2021). (Smith *et al.*, 2023) note that the development of inclusive

community policies and services not only promotes community harmony, but also enhances the sense of belonging and well-being of older adults. Care should be taken to listen to the voices of older people during the community renewal process to ensure that their needs and expectations are reflected (Chen *et al.*, 2022).

So to speak, in addition to a healthy body, the elderly of cultural memory, social interactions, and participate in community construction demand gradually increased. Community renewal model based on active aging is particularly important in this context. In order to achieve this goal, it is necessary to understand the intrinsic link between the spiritual needs of older residents and their living environment (Ma *et al.*, 2021).

This study introduced the theory of "sense of place", to expand community research Angle of view from the physical space to social interaction. Through multi-dimensional analysis, the interaction and connection among individual emotional attachment, community development and social cohesion are discussed. It provides a comprehensive perspective on the design of "dual aging" communities and can further help develop effective aging strategies. The framework also provides valuable insights for policy-making (Yang *et al.*, 2023).

3. Research Area and Methodology

3.1. Research Area

The study focused on the "Silicon Valley Pioneer Community". The community was established in 2023 and is located in Jiancai Dongli, Xisanqi Street, Haidian District, Beijing. The community was built in 1996 and has a high proportion of elderly residents, with those aged 65 and above making up 17% of the total population—significantly exceeding the 7% threshold, thus qualifying as a typical double-aging community. In 2022-2023, the "Neighbouring Courtyard" community space renewal project was initiated, covering approximately 2,000 square meters and aimed at creating age-friendly spaces. The project is divided into three parts: A: Compassionate Unity Courtyard : Carry out community compassion work; B: Integrated Activity Square : Accommodate diverse community activities; C: All-Age Shared Court: Promote all-age interaction. This project serves as an excellent case study for research on positive aging community development in China.

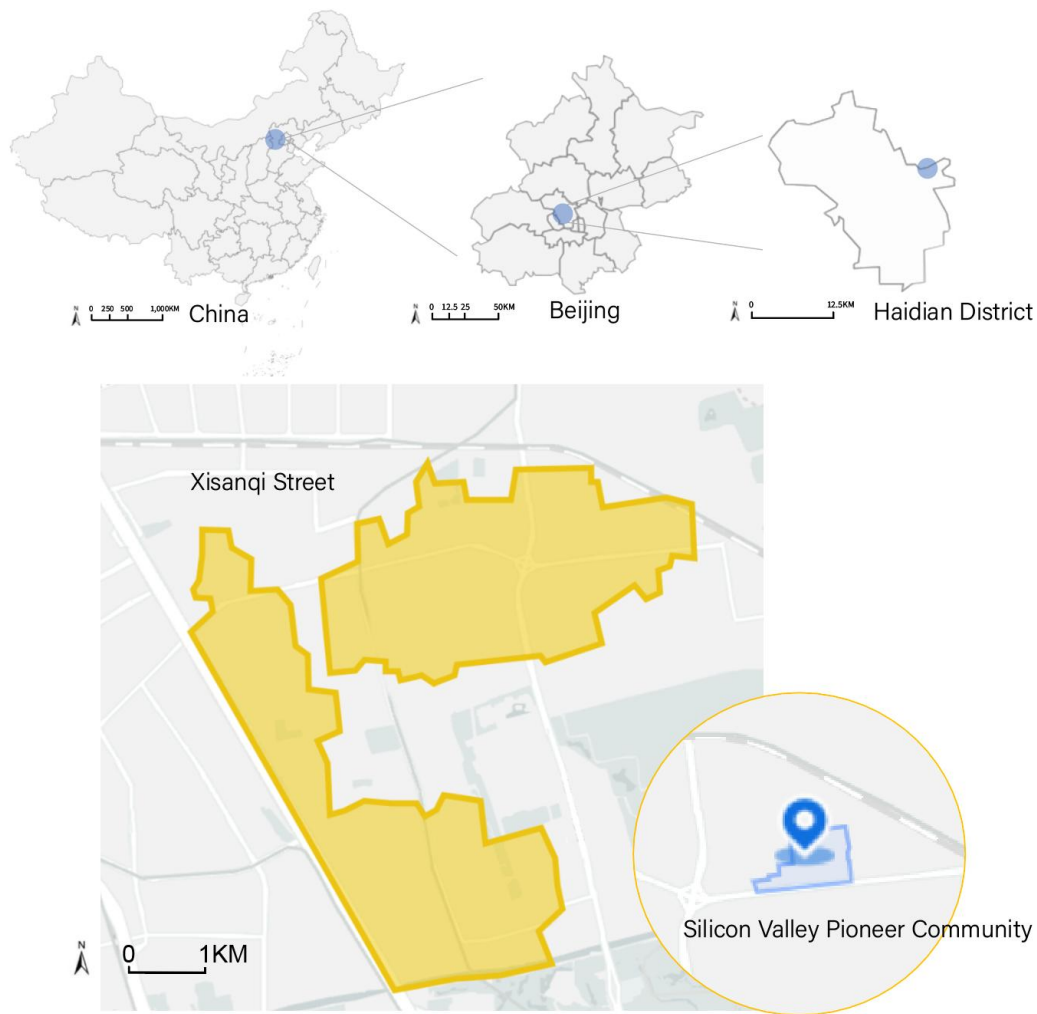


Figure 2. Research Project Location and Scope. Source: Author's Own Drawing.

3.2 Research Methodology

This study employs qualitative research methods, utilizing on-site observations, questionnaires, and in-depth interviews to collect data on elderly residents' perceptions and suggestions regarding community renewal. From the perspective of older adults' sense of place, the study analyses the positive aging design techniques and actual effects in community renewal.

The interview guide includes three main aspects: (1) Facility Use and Dependence: Exploring the extent to which elderly residents use and depend on community facilities and services, understanding the impact of post-renovation amenities on daily life convenience and satisfaction. (2) Cultural Integration and Emotional Connection: Investigating elderly residents' sense of belonging and emotional ties within the community, including whether the community meets their emotional belonging needs and how the community environment and neighbour relationships influence emotional attachment. (3) Impact of Community Activities: Examining how community activities affect elderly individuals' self-worth and their participation frequency and interest in social and cultural activities, exploring the relationship between their initiative and community interaction.

From October 2023 to September 2024, five on-site surveys were conducted in the Xisanqi community, targeting elderly individuals aged 50 and above who have lived in the community long-term and possess

the ability to understand and communicate effectively. This ensures a comprehensive reflection of their feedback and expectations regarding community renovation and living conditions. A total of 132 valid questionnaires were collected, and 20 elderly residents who have lived in the community for over five years were selected for in-depth interviews. Data on the development and transformation of emotional identity in community life, design styles and functions of living environments, social participation, and interaction experiences and perspectives were collected and coded using NVivo.

Questionnaire item		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Place Dependence	1. I need the facilities and services here	5	4	3	2	1
	2. Living here is very safe and convenient	5	4	3	2	1
	3. The living environment provided here makes me feel secure and comfortable	5	4	3	2	1
Place Identity	1. I appreciate the environment and service facilities here	5	4	3	2	1
	2. This place embodies the spirit and culture that I relate to	5	4	3	2	1
	3. I feel like I'm part of a community here	5	4	3	2	1
Place Attachment	1. I feel a deep emotional connection to the community here	5	4	3	2	1
	2. I love staying here, the people and the atmosphere make me feel very close	5	4	3	2	1
	3. I can feel my worth here. This place means a lot to me	5	4	3	2	1

Figure 3. Place Attachment Scale. Source: Author's Own Drawing.

4. Research Results and Discussion

4.1 Meeting Basic Needs of the Elderly is the Foundation for Establishing Place

Dependence

The Silicon Valley Pioneer Community originally included convenient facilities such as a supermarket, barbershop, dry cleaner, and community health service station. However, the overall commercial atmosphere is weak, and basic infrastructure like roads is deteriorating. The public spaces are inefficient, lacking outdoor recreational facilities. Over 2,000 square meters of building space have long been idle, negatively impacting the living environment and failing to meet residents' diverse cultural and daily life needs.

Survey results indicate that Zone C scored the highest in terms of facility completeness and comfort, particularly excelling in the indicators of "necessary facilities," "safety and convenience," and "environmental comfort." In contrast, Zone A suffers from insufficient facilities, leading to lower usage frequency and shorter stay times for seniors. As one interviewee noted, "*A doesn't have a lot of facilities, so I don't spend a lot of time here.*" (Interviewee 15, 62-year-old, Male). Improvements in lighting conditions in Zone B have enhanced nighttime safety, encouraging more seniors to participate in evening outdoor activities. One participant remarked, "There is a row of lights in B, and we all like to do activities here at night because it is not easy to fall when we can see the road clearly." (Interviewee 5, 55-year-old, Female).

Adequate living service facilities and activity spaces significantly contribute to seniors' sense of place attachment. Compared to common facilities, designs that consider the real, daily needs of elderly residents

receive more favorable reviews. For instance, many elderly residents face challenges in meal preparation, and over half of the interviewees indicated that a "central kitchen" providing meals effectively resolves their difficulties, becoming an indispensable part of their community life. One 68-year-old retired empty-nester stated:

"My kids are away, and I can't cook at my age. I eat in the central kitchen in C almost every day. I go to other parts of the neighborhood when I need to, but not often."

(Interviewee 12, 68-year-old, Female)

In summary, comprehensive facilities not only enhance seniors' convenience and safety but also increase their reliance on the community. Meeting the specific needs of the elderly through targeted facilities is a fundamental means and basis for promoting active aging.



Figure 4. Project Real Scene. Source: Author's Own Photography.

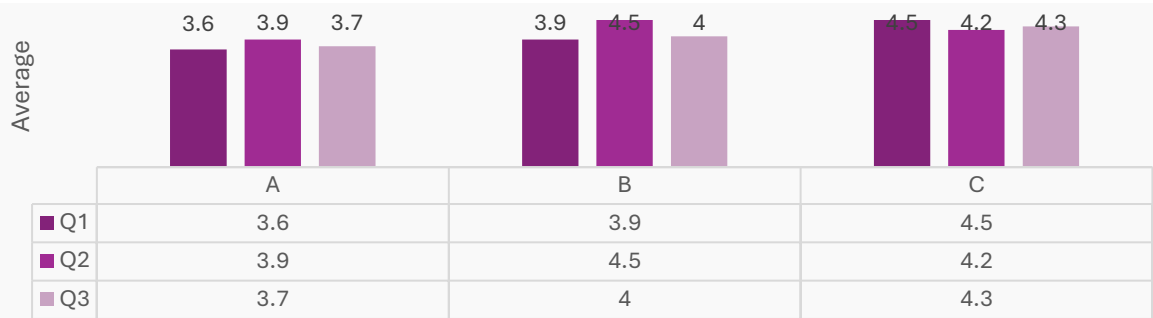


Figure 5. Place dependent average score. Source: Author's Own Drawing.

4.2 The Impact of Cultural Elements on Place Identity among the Elderly

At the level of place identity, improvements in the overall environment significantly enhance seniors' sense of belonging and fondness for the community. Survey results indicate that most seniors appreciate the enhancements in the community environment and believe that the increase in service facilities has improved their convenience of living. Many seniors express that after the environmental upgrades, they not only enjoy visiting the community themselves but also frequently invite old friends to join them. One interviewee remarked, *"After the renewal of the community, the environment became much better. I not only came here by myself but also often asked my old friends to come here to play."* (Interviewee 9, 57-year-old, Female). This demonstrates that environmental improvements play a positive role in fostering social interaction and community participation among seniors.

Moreover, among the various elements of community space, cultural carriers hold significant importance (Borer, 2006), and seniors show a strong interest in the cultural aspects of their community. They believe that these cultural elements reflect a spirit relevant to them and enhance the cultural atmosphere. For instance, seasonal poetry engraved on the ground and concentric knots have become important visual symbols for seniors to express their community identity. As one resident described, *"The design of seasonal*

poems engraved on the floor tiles enhances the cultural atmosphere of B. But I prefer the concentric knot on the C ground because it reminds me of activities with everyone.” (Interviewee 19, 66-year-old, Male).

Incorporating community culture is crucial for enhancing seniors' sense of identity and belonging. These cultural designs not only elevate the aesthetic value of the community but also strengthen seniors' sense of place identity, further promoting their active aging. Additionally, 83% of respondents indicated that the cultural elements contributed to their sense of community integration, with one stating, “My picture on the wall here makes me feel like I'm part of this community.” (Interviewee 15, 68-year-old, Male). Cultural designs related to seniors' life experiences can more effectively evoke their community memories and foster a sense of belonging compared to generic cultural designs.



Figure 6. Cultural Element Paving. Source: Author's Own Photography.

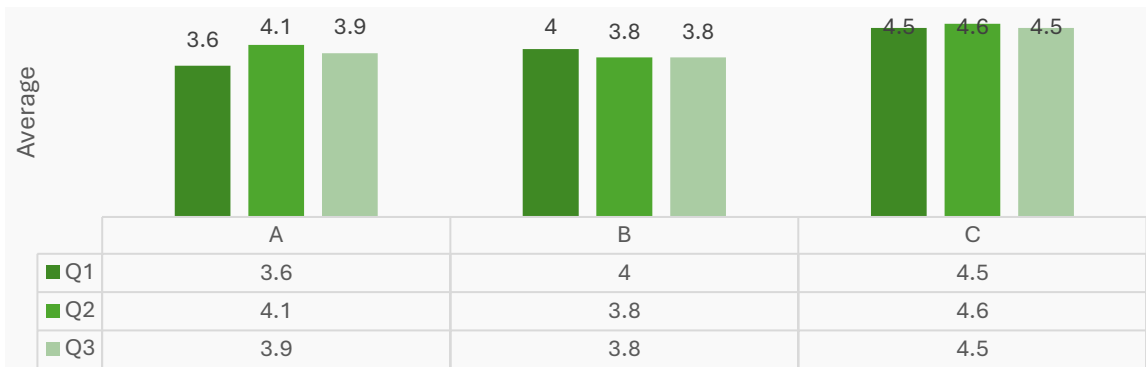


Figure 7. Place Identity average score. Source: Author's Own Drawing.

4.3 The Role of Community Renewal in Fostering Place Attachment among the Elderly

Place attachment represents a higher level of place sense and is often the most challenging to cultivate. Currently, many communities overlook the emotional needs and creative participation of the elderly, often viewing them as "passive and outdated vulnerable groups," leading them to become "bystanders" and "burdens" within the community(Boudiny, 2013).

During the research, it became evident that being valued and having opportunities to participate in community spaces significantly enhance elderly residents' place attachment. If the community can facilitate and guide active participation, or even organize collective actions among residents, it can help them develop a deeper sense of place attachment (Rollero and De Piccoli, 2010).

In the Jian Cai Dong li community, the primary mode of community renewal is led by Party building, gradually developing resident-led initiatives. This grassroots social development explores a new governance model of "collective discussion," which, compared to top-down approaches, better meets residents' diverse usage needs and improves the efficiency of renovations, based on the behavioural characteristics and usage habits of the residents(Yang *et al.*, 2023). Many daily sports activities and

volunteer organizations in the community are primarily led by elderly individuals, who express a strong sense of responsibility toward their community and a desire to contribute further to its development. As one participant noted: *“Our opinions were solicited in the early stages of the design of the project, and I also joined the community volunteer organization. I feel that I have contributed to the construction of the community, and I hope that there will be more activities for us elderly people to participate in in the future.”* (interviewee 8, 59-year-old, Male). This indicates that being valued and having participation opportunities in community spaces can enhance the elderly's place attachment. If the community promotes and guides active involvement, it can help the elderly develop a deeper connection to their place.



Figure 8. Photos of Activities for the Elderly. Source: Government News.

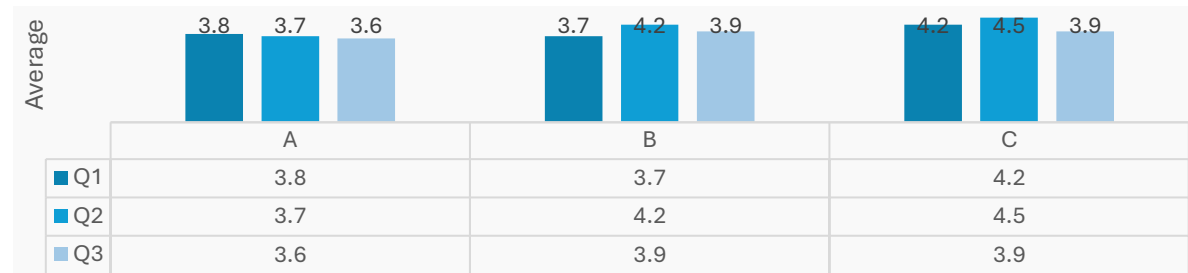


Figure 9. Place Attachment average score. Source: Author's Own Drawing.

In summary, based on sense of place theory, community renewal strategies that incorporate functional, cultural, and social participation elements can effectively promote active aging. Empowering the elderly and leveraging their advantages in time, energy, and social experience contribute to creating more inclusive and thriving communities.

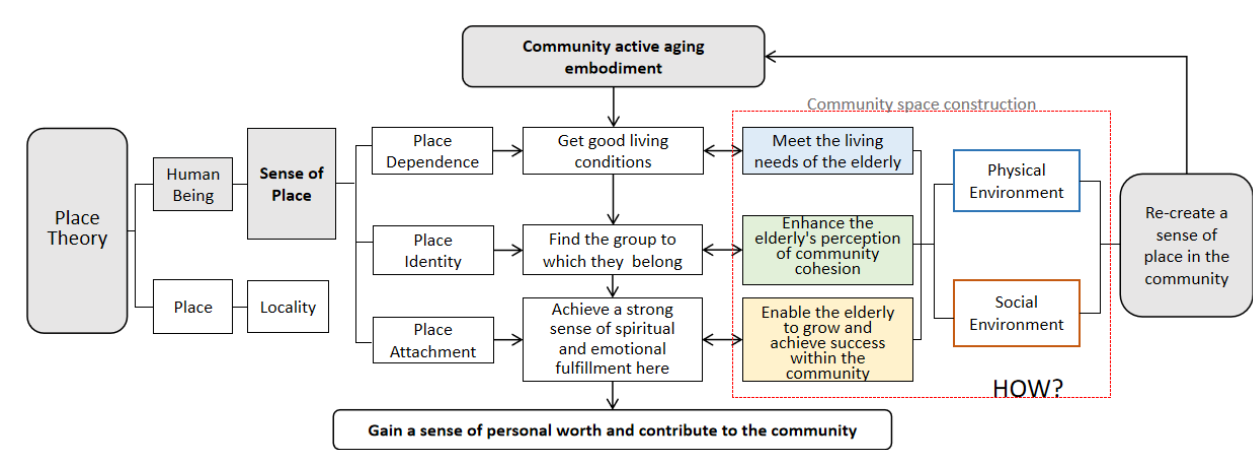


Figure 10. The sense of place promotes the active aging mechanism of the double-aging community score. Source: Author's Own Drawing.

5. Conclusion and Recommendations

This research project fully respects the opinions and needs of the elderly, employing a model of co-design, co-construction, and collaborative governance, alongside innovative workshops. It has created a multi-layered elder-friendly community structure that encompasses basic living needs, cultural education, and neighborly interactions, integrating interactive devices that are easy for the elderly to engage with, as well as elements that reflect the memories of the older generation, such as a smile photo wall. These innovations stimulate the enthusiasm and creativity of the elderly, enhancing their sense of place and deepening emotional connections within the community, embodying an active aging renewal model for double-aging communities from the perspective of sense of place.

The research reveals that the potential of the elderly in community development is often underestimated. As they enter old age, residents experience lifestyle changes due to retirement and their children starting families, resulting in more leisure time compared to other age groups. This enables them to engage more deeply in community life and fosters a stronger emotional attachment and enthusiasm for community involvement. Additionally, the elderly possess rich social experiences and a comprehensive understanding of community development, driving their desire to play a more active role in community building and activities, contributing to the recreation of social value.

The study recommends improving community facilities to meet the basic needs of the elderly, incorporating cultural elements to enhance the community atmosphere, and breaking the bias that views the elderly and aging as entirely negative factors. It advocates for the adoption of active aging renewal methods in old community renovation projects, aiming to better meet the sense of place needs of the elderly and promote their positive roles in inclusive community development. Furthermore, it encourages the promotion of bottom-up community renewal and governance models.

Community renewal based on field sense theory can significantly enhance the sense of dependence, identity and belonging of the elderly on the community, thereby enhancing the cohesion of the community, supporting active aging and sustainable development, and encouraging the elderly to participate in community construction, and allowing the elderly to find emotional satisfaction in their own environment while contributing to the development of the community by improving living conditions and integrating cultural elements. Empower seniors with greater roles and responsibilities to help build a more vibrant community. In summary, the sense-based approach to community renewal provides an effective strategy for age-friendly community development and provides valuable insights to address the "double-growth" challenge in an aging society.

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