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# *The Therapeutic Landscape Environment Design of an Age-Friendly Community*

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***Abstract:*** Currently, China's population age structure has completed the transition towards an elderly-oriented composition. Population aging is gradually exerting its influence across various domains of societal life, marking China's entry into an aging society. In response to the current challenges in elderly care, home-based care for the aged has gained widespread recognition from both the industry and society, becoming a primary mode of elderly care in our country for the present and the foreseeable future. While age-friendly communities provide a fundamental environment for home-based care, they primarily focus on meeting the safety and basic daily needs of the elderly, overlooking how the environment can contribute to the rehabilitation and enhancement of their physical and mental well-being. Therefore, this paper, centered around age-friendly communities, proposes integrating therapeutic landscapes to better fulfill the needs of the elderly and make communities more suitable for elderly residents.

***Keywords:*** age-friendly communities, therapeutic landscapes, community landscapes, elderly-oriented

## 1. Introduction

Population aging is one of the foremost societal challenges of the 21st century. As the proportion of elderly individuals increases, so does the burden on society. The impact of population aging extends gradually across various aspects of social life, and China has entered the era of an aging society, with elderly care becoming a significant concern for our nation's future development. Due to historical and developmental factors, it is challenging for China to adopt a fully socialized approach to elderly care, similar to that seen in Western developed countries. Consequently, the exploration of an elderly care model tailored to our national context has become a focal point for academia and society at large. After years of research and practical experience, home-based elderly care has matured and gained widespread recognition, positioning itself as a primary mode of elderly care in China for the present and foreseeable future. This study, grounded in the concept of home-based elderly care, builds upon China's experience while incorporating advanced international principles. It introduces a novel urban community development concept - the "Age-Friendly Community", which aims to alleviate the pressure of elderly care and integrate home-based elderly care into the daily agenda. However, current designs of age-friendly communities primarily focus on meeting the safety and basic daily needs of the elderly, neglecting the potential of community landscape design in enhancing people's physical

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and mental well-being. Therefore, this paper strives to combine therapeutic landscapes with existing age-friendly community designs, aiming to provide elderly individuals with a secure, comfortable, and convenient living environment that enables them to maintain their capacity for social participation and independent living. This approach is expected to alleviate the pressure of elderly care, promote the physical and mental well-being of the elderly, and enhance their social integration.

## 2. Age-Friendly Community

The design of age-friendly communities is aimed at meeting the specific needs of older individuals and improving their quality of life within the community setting. [1] As the global aging process accelerates and the proportion of elderly individuals continues to rise, their demands within the community also increase. [2] Therefore, the design of age-friendly communities has become a prominent societal concern.

In the design of age-friendly communities, attention must be paid to three key aspects: the needs and interests of older individuals, the principles of community co-construction and sharing, and cultural development within the community. Firstly, community development should consider the physical condition, psychological needs, and lifestyle habits of the elderly. Residential needs for these individuals should encompass factors such as safety, convenience, and accessibility. Medical facilities should cater to their special requirements, offering services like regular health check-ups and long-term care. And fitness and recreational facilities should be designed with the physical conditions of older individuals in mind, providing suitable sports and cultural activities to meet their needs.

Secondly, community co-construction and sharing should be achieved through the collective efforts and participation of residents, creating a closely-knit community network and interactive platform that promotes mutual assistance and cooperative success among residents. Community co-construction and sharing can be realized through mechanisms such as residents' committees and community volunteers, involving older individuals in the development of the community, increasing their social activities and sense of participation. Additionally, community shared facilities can offer older individuals access to a broader range of community services and support.

Lastly, cultural development within the community should emphasize the preservation and promotion of outstanding traditional culture, providing older individuals with platforms for learning, communication, and entertainment. Activities like traditional culture courses, artistic performances, and book clubs can enable older individuals to understand and carry forward traditional culture, also enhancing their social interactions and exchanges.

In landscape design for older individuals, considerations must be given to their physical mobility, including walking, stair climbing, sitting, and standing. Designers should enhance the convenience and safety of older individuals' activities through rational site layout and architectural design. For example, community pathways should be spacious and level, stairs should have non-slip materials and handrails, and seating should be ergonomic for ease of use by older individuals. What's more, accessibility is also an important factor to consider in the landscape design for older adults. There are significant differences in mobility among older individuals, so the use of assistive devices such as wheelchairs, walkers, and canes should be taken into account in landscape design. Designers should incorporate accessibility requirements into site layout and architectural design, such as the installation of ramps and elevators. Activity intensity is another crucial factor to consider for the elderly. As their physical abilities gradually decline, it is necessary to provide activity levels that are suitable for their physical condition. For instance, community fitness equipment, dance activities, and swimming pools designed for older individuals should cater to their fitness needs. Shade and therapeutic plants should also be factored into design, as older individuals are susceptible to direct sunlight and high temperatures during outdoor activities. Therefore, shading facilities such as trees and sun umbrellas

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should be installed. Additionally, planting therapeutic plants like herbs and lavender can enhance people's psychological well-being. Elderly individuals have diverse interests and activity needs, so communities should offer a variety of cultural and recreational activities like painting, music, and crafts to meet their requirements. Besides, lighting and maintenance costs should also be considered. In community lighting design, the visual conditions of older adults should be taken into account, providing suitable brightness and color. Meanwhile, community maintenance costs should be controlled reasonably to avoid unnecessary burdens on the elderly's lives.

In summary, the design of age-friendly communities must consider the unique needs and limitations of older individuals, offering services such as housing, medical care, fitness, culture, and entertainment that are tailored to their requirements. Landscape design should account for factors such as physical mobility, accessibility, activity intensity, shading, therapeutic plants, activity variety, lighting, maintenance costs, and circulation to meet the needs and limitations. Designing age-friendly communities can enhance the health, happiness, and social participation of older individuals. Within such communities, the elderly can enjoy the safe, convenient, comfortable, healthy, and dignified community environment and services. They can also actively participate in community co-construction, sharing, and cultural development, increasing their social activities and sense of participation, ultimately improving their quality of life and happiness. [3] The design of age-friendly communities not only meets the specific needs of older individuals but also promotes community co-construction, sharing, and cultural development, establishing a close-knit community network and interactive platform, which has positive implications for enhancing community cohesion, promoting sustainable community development, and improving community resilience. Therefore, it is a vital issue that requires attention and commitment from all sectors of society.

While age-friendly communities have matured, there is still a lack of therapeutic effects. Currently, they predominantly feature ornamental elements, which are more oriented towards aesthetics, while the physical and mental health of older individuals remains vulnerable compared to younger adults. Therefore, we need to consider how to enhance the therapeutic effects within age-friendly communities.

## 3. Therapeutic Landscape Design

Therapeutic landscape design is a people-centric approach aimed at promoting physical and mental well-being through natural elements and the surrounding environment. Within this context, therapeutic gardens hold a significant role and come with specific functions and design requirements. The design of therapeutic gardens should prioritize the needs and experiences of users, creating an environment that is comfortable, tranquil, accessible, and easy to maintain. Designers should consider users' cultural traditions and aesthetic preferences, using familiar forms to arrange plants and features, ensuring users feel at ease and pleased. [4]

In the design of therapeutic gardens, legibility is a crucial element, referring to users' ability to clearly understand and identify different areas and functions of the garden. Designers should achieve legibility through sensible layouts and wayfinding systems, allowing users to easily navigate and reach their destinations. Likewise, accessibility is a key factor, ensuring that primary areas and functions of the garden are easy to access without unnecessary obstacles or difficulties. To achieve this, designers should consider users' physical conditions and mobility, designing spacious, level pathways and easily climbable steps. Additionally, designers can incorporate accessibility facilities like ramps, handrails, and elevators to facilitate users' entry and exit from the garden.

The design of therapeutic gardens should also emphasize affinity, creating a warm and friendly environment through the garden's layout and plant arrangement. Affinity can be achieved by using soft colors and materials, arranging smooth lines and shapes, providing comfortable seating, and installing shading facilities. Furthermore, the design should focus on the comfort, both physiological

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and psychological, of users, creating an environment that reduces stress and promotes relaxation. Designers can employ various techniques such as acoustic isolation, plant filtration, water features, and lighting to create a quiet and comfortable atmosphere.

In addition to the mentioned elements, the design of therapeutic gardens should also emphasize artistry and exploration. Artistry involves using artistic elements and design techniques to create aesthetics and visual appeal, enhancing users' pleasure and satisfaction. Exploration, on the other hand, involves using metaphors and symbolism in design to stimulate users' curiosity and sense of inquiry, increasing their engagement and experiential depth. What's more, the design of therapeutic gardens should consider elements such as focal points, privacy, panoramic views, and ease of maintenance to create a fully functional, aesthetically pleasing, and easily maintainable garden environment.

In summary, the design of therapeutic gardens should prioritize users' needs and experiences, creating an environment that is quiet, comfortable, friendly, beautiful, and easy to maintain to promote physical and mental health and recovery. However, current therapeutic gardens are primarily used in healthcare environments and are not integrated into community environment design. Therefore, this paper emphasizes that integrating landscape design that meets the therapeutic needs of the elderly into the construction of age-friendly communities can provide a comfortable and healthy living environment for the elderly. It helps alleviate stress, express emotions, enhance social interaction, and promote physical and mental well-being.

## 4. Age-Friendly Community Design with Therapeutic Landscape Integration

The unique physical and psychological needs of older adults require more attention and care. Combining with therapeutic landscapes can promote sustainable community development, enhance the ecological value, and improve environmental quality. This approach can create a healthier, more comfortable, warm, and welcoming community environment, meeting the residential and lifestyle needs of older adults, promoting their physical and mental well-being, and enhancing their social integration. Therefore, combined with age-friendly design requirements and successful cases of therapeutic landscapes, the therapeutic environment designs in age-friendly communities can be realized in the following ways.

### 4.1. Color Therapy

Color is a crucial therapeutic element that can influence people's emotions, psychology, and physiology. In age-friendly communities, soft and soothing colors such as light blue, light green, and beige should be used to create a relaxed and pleasant environment. These colors can provide older adults with a gentle and comfortable feeling, helping to alleviate stress and anxiety. Designers can also create different moods and atmospheres by combining different colors. For example, using red and yellow can evoke vitality and enthusiasm, while green and blue can create a comfortable and relaxing atmosphere. [5]

### 4.2. Plant Therapy

In the design of age-friendly communities, plant therapy can be implemented by incorporating natural elements such as green plants, flowers, lawns, and water features. These plants can simulate a natural ecological cycle, encouraging interaction between older adults and nature, and increasing their desire for outdoor activities, thereby promoting both physical and mental well-being. When selecting plants, designers should consider factors like height, species, and colors to create multi-dimensional and diverse landscapes. For example, tall trees can provide shade and coolness, flowers can attract

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butterflies and birds, lawns can offer space and a natural texture, and water features can introduce natural elements and soothing sounds.

### 4.3. Home Safety Systems

Safety is a crucial consideration in the design of age-friendly communities. Home safety systems should be designed with the physiological and psychological characteristics of older adults. This includes features like accessible design, elderly-oriented lighting, and high-definition recognition systems. These measures can create a safe living environment that meets the control and safety needs of older adults. For instance, installing accessible pathways and handrails improves mobility and safety, elderly-oriented lighting reduces visual fatigue and dizziness, and high-definition recognition systems enhance the sense of security and alertness among older adults. [6]

### 4.4. Natural Elements

Natural elements play a pivotal role in therapeutic environments by providing visual and sensory experiences that connect older adults with nature. In the design of age-friendly communities, incorporating natural elements such as green plants, flowers, lawns, and water features is essential to offer natural visual and sensory experiences. These environments allow older adults to relax, reduce stress, and enhance their immune systems. Furthermore, the inclusion of natural elements in the community can create diversity and depth. For example, using different heights, species, and colors of plants can create layered and diverse landscapes.

### 4.5. Supporting Diverse Activities

Designing age-friendly communities requires providing diverse cultural and recreational activities, such as painting, music, and crafts. Similarly, therapeutic landscapes can offer a variety of activities like yoga, meditation, and fitness. These activities cater to the different needs of older adults, promoting their social interaction and physical and mental health. Community designers can establish multiple activity spaces, including multipurpose rooms, fitness centers, and dance studios, allowing older adults to choose activities that interest them. These spaces can incorporate natural elements and therapeutic landscapes, using materials like wood and stone to enhance the natural feel and atmosphere, and create a quiet and comfortable environment.

### 4.6. Social Spaces

Designing age-friendly communities necessitates considering the social needs of older adults to create a warm, friendly, and community-oriented environment. In community design, the placement of social spaces is crucial. For instance, setting up small squares, courtyards, and resting areas allows older adults to gather and socialize. These places enhance community interaction and human connection, helping people establish friendships and social networks. Moreover, social spaces should cater to the needs and limitations of older adults, offering comfortable seating, easily movable tables, and convenient tableware for their comfort during interactions and activities.

### 4.7. Environmental Sustainability

The design of age-friendly communities should prioritize environmental sustainability to protect the natural environment and promote community's sustainable development. In community design, environmentally friendly materials and energy-saving equipment can be utilized to minimize the impact on the environment. For example, communities can incorporate facilities such as solar panels and rainwater harvesting systems to improve energy and water resource efficiency. Additionally,

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enhancing the ecological value and environmental quality of the community through the addition of natural elements and green landscapes can contribute to sustainable development. Depending on the community's specific circumstances and needs, community designers can employ various means to enhance community sustainability and environmental friendliness.

Combining therapeutic landscapes with age-friendly community design can provide a healthier and more comfortable living environment, promoting the health and well-being of older adults, enhancing community interaction and sharing, addressing the special needs and limitations of older individuals, and fostering sustainable community development. This approach helps create a more humane and sustainable community environment and elevate the overall quality of life and well-being within the community.

## 5. Conclusion

This article aims to enhance the physical and mental well-being and happiness of older adults by combining the requirements of age-friendly communities and therapeutic landscapes. Creating a society where age knows no boundaries and everyone shares equally is our ultimate goal. Ensuring that the elderly population can enjoy a happy old age is a responsibility that the government and society must jointly bear. To solve the current pension problem in China, we must start from China's national conditions and find a way to deal with the aging with Chinese characteristics. In age-friendly communities, we should provide convenient transportation facilities, a friendly social environment, and public spaces suitable for older adults to participate in various activities. Additionally, introducing therapeutic landscapes can create soothing, relaxing, and healing environments, improving the psychological well-being and quality of life for older adults. These measures contribute to establishing a community that prioritizes people and cares for the elderly, offering them a safe, livable, and socially supportive living environment. In summary, community development aimed at addressing population aging not only meets the demands of home-based care for the aged but also aligns with the requirements of our evolving society. By constructing age-friendly communities and providing therapeutic landscapes, we can enhance the physical and mental well-being and happiness of older adults. Government and society should collaborate to create a sustainable and livable community environment for the elderly.

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