

# Explore the Rehabilitation Landscape Design under the Home-Based Elderly Care Mode

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**Abstract:** With the in-depth implementation of the socialist reform and opening-up development policy, China's sustained and rapid development of social productivity, the overall quality of people's spiritual life has been further improved year by year, the growth rate of population birth rate and average mortality rate will gradually decrease with the technological progress of modern human and medical technology, and the natural life expectancy per capita will be prolonged day by day, As a result, the social problems facing the accelerated aging of population have gradually evolved into one of the main problems faced by the aging of population and society in China in the future. As the development process of urban and rural aging in China is far exceeding the overall speed of economic development, the problem of "getting old before getting rich" has become a significant phased feature. Under the guidance of analyzing the above macro background, this paper focuses on the landscape reconstruction design of China's elderly rehabilitation center under the influence of home-based elderly care mode, which has very important theoretical and practical significance. Through questionnaire survey, this paper statistically analyzes various aspects of the elderly, and designs a reasonable rehabilitation landscape.

**Keywords:** Home-Based Elderly Care, Rehabilitation Landscape, Elderly Care Model, Landscape Design

## 1. Introduction

The aging phenomenon is becoming more and more obvious, which makes the pension problem from the perspective of society to the perspective of family and become a hot topic. The trend of accelerated aging of the population has significantly increased the proportion of elderly people raising children in rural areas, significantly increased the social support rate, and the social service industry is also facing great challenges, such as the renewal and reorganization of social pension resources, the quota of pension service personnel and the improvement of service quality. Difficulties and opportunities go hand in hand. The pension industry takes this opportunity to seize the aging problem and seek new development ideas. First of all, the market supply-demand relationship of pension security services and facilities market must change. The number of the elderly population has gradually increased, and the proportion of the elderly and sick elderly in the population has increased rapidly. The demand for facilities and services in social pension service places has also increased significantly, and more practical requirements and development directions have been put forward in terms of quality, function and practical performance. Secondly, the proportion of urban residents' consumption demand for high-quality medical and health science and technology services has increased. The elderly are caused by their unique physical health and special conditions. This is a group of elderly people. Their special needs for various health and resource protection will continue to increase, and their requirements for social medical treatment will be higher and higher, resulting in the transformation from "providing for the elderly" to "enjoying the elderly". Then there is the restructuring of social demand structure. A variety of unique views on the age of the so-called "pension" formed by the elderly also resulted in the development, which reflected that people at that time had some special social material and spiritual needs different from those of various special age groups in China and other regions. This will further indicate or mark that in the future, China will continue to grow in the overall demand for long-term social pension supplies and services, and the market position of the demand for the elderly may still gradually occupy an important dominant position in which it plays an increasingly

important dominant role, At the same time, China's personalized health care and related consumption industry for the elderly, which is gradually cultivated to realize the comprehensive and meet the long-term personalized and special consumption service needs of the elderly in the future, will be more likely to face another development strategic opportunity of unprecedented and more important market strategy at the same time [1].

The urban construction of most capitalist countries preceded that of developing countries. The urban design theory began in the middle of the 19th century. Later, with the development of ecology, ergonomics and other scientific fields, design gradually integrated into these disciplines and tended to meet people's living needs. In the late 19th century, capitalist countries have begun to enter an aging society, and scholars in related fields have to come up with countermeasures to deal with this situation. Starting from the characteristics of the elderly, combined with the social situation and aging situation of the country, and integrating sociology, psychology and other disciplines, this paper makes a more in-depth theoretical discussion on the landscape planning and design of residential areas for the elderly, and has accumulated a lot of experience in practice. Western countries divide the living environment of the elderly into the planning and design of the elderly community, the design of the elderly housing and the elderly welfare facilities [2-3].

Under the new background of China's aging trend, residential areas should be used as a new carrier of home-based elderly care. The research method of rehabilitative landscape greening design for the elderly should be applied to the research of outdoor landscape environment in urban residential areas, so as to fully meet the unique physiological and psychological needs of Chinese elderly and the diversified needs of psychological and behavioral characteristics, Explore the outdoor landscape environment design of the residential area suitable for the elderly to spend their old age safely, and design an outdoor landscape environment suitable for the elderly and with rehabilitation, health care and convalescence functions for the special group of the elderly, so that the landscape environment of the residential area is not only beautiful, but also more functional. Not only can the elderly live a comfortable, healthy and happy old age in the residential area, but also provide some basic information and design strategies for the outdoor environment construction of the residential area in the future. This paper analyzes the problems from the perspective of the elderly by issuing questionnaires, and obtains a reasonable design scheme through further analysis of the collected questionnaires [4-5].

## **2. Overview of Rehabilitation Landscape Design under Home-Based Elderly Care Mode**

### ***2.1 Overview of Home-Based Elderly Care Model***

The model of home-based elderly care (service) mainly refers to that the government provides basic support through the government, with social services and family members as the main core, professional family community organization network as its effective support, and elderly families and professional care and service team organizations as its basic strength, It is a family elderly care service socialized home care service for all the elderly living in cities and towns and the social school-age retired elderly groups who have not worked at home for a long time, which mainly provides services in the form of basic content to help timely and properly solve the practical work difficulties of the elderly in their daily life. The main contents and modes of service provision mainly include the provision of basic services for the elderly to take care of their own family life, care service mode, home care for the elderly, medical care and elderly care, as well as care for the spiritual world of the elderly and nursing rehabilitation services. There are two modes to provide the general information of the main work contents: the same batch of senior professional life service and security institution personnel who have been trained, assessed and certified for many times by regular and professional personnel are responsible for directly and on-site, and have the obligation to provide free services for the family elderly, and carry out professional services such as daily services, care and rehabilitation for the elderly; The day rehabilitation medical care service and nursing care center for the elderly in the community established in the community neighborhood committee hospital provides free day or night care and rehabilitation services for all the children of the elderly in the region. The main contents and general management requirements of the service are for the elderly with three noes in the community [6-7].

Its biggest feature at present, its last major feature is that it has fully solved and overcome many social practical difficulties brought by the lack of capacity of grass-roots family pension and welfare institutions in China's rural society, China's urban older women and urban laid-off female workers at home and other elderly groups, low-income families and families lacking economic living conditions and care The vast number of urban elderly families who need long-term medical care and service care,

such as long-term and home-based care, and this is a combination of these two relatively special difficulties and the common needs and characteristics of their own lives, Mobilize the main forces of all parties in the community, including the whole social family and other social welfare enterprises, and participate in and establish a social family nursing home voluntarily or by means of capital contribution, which has become a good development model of old-age security that can benefit the elderly in the community, caregivers, government public management services and other people in the community for their whole life. But at present, if we only blindly adopt some older rural children or laid-off and unemployed old male and female workers or family members as a family service provider for a long time, and do not pay special attention to and introduce some professional home-based elderly care skilled talents in rural related fields who are older and younger, Home-based elderly care services and ways of providing for the elderly will also be difficult to develop rapidly and reach a certain new height in a specific new stage in the future [8-9]. At present, most colleges and universities across the country have been trying to set up a number of elderly care specialty with professional direction closely related to China's health and elderly care consumption mode in the near future. More importantly, relevant medical service and industrial institutions should continue to consider and timely cultivate or introduce applied talents with professional technology in such fields, Improve China's current innovative development model of family and elderly care service industry with Chinese characteristics.

## 2.2 Rehabilitation Landscape Classification

By consulting the literature on rehabilitation landscape, the rehabilitation landscape can be divided into two categories according to the treatment object: as shown in Figure 1.

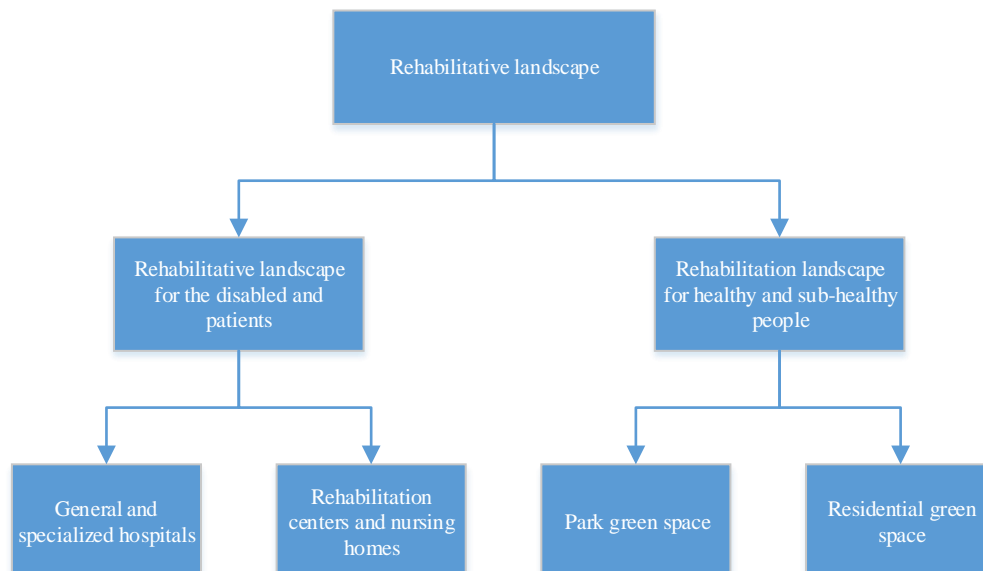


Figure 1: Rehabilitative landscapes are classified by users

### (1) Rehabilitative landscape for patients and persons with disabilities

The rehabilitation landscape for patients and the disabled mainly includes the rehabilitation landscape of general hospitals and specialized hospitals, mainly focusing on hospital greening, and the other part is rehabilitation centers and sanatoriums for landscape assisted treatment. Compared with hospitals, the location of such places is in the suburbs or scenic spots with beautiful natural scenery. The convalescent factors can be divided into spa, forest, seaside and other convalescent landscapes.

### (2) Rehabilitation landscape for healthy and sub-healthy people

This type of rehabilitation landscape mainly includes residential green space and park green space.

## 2.3 Theoretical Research on Rehabilitative Landscape

### 2.3.1 Horticultural Therapy

The so-called healthy agricultural horticultural therapy is actually a technology that enables all rural workers who need or receive comprehensive physical and mental rehabilitation and health care to plant,

cultivate, domesticate, breed, maintain, manage and conserve these flowers, fruits, plants and plants systematically and scientifically by going to the farmland in person, Rural patients who do not participate in these labor and production work will also learn such a new healthy and upward life value through personal experience in the whole process of agricultural labor and production management. With the gradual promotion of our new health care methods and the in-depth implementation of practical verification and research, we can further find that our new healthy treatment methods can not only directly treat ordinary patients, At the same time, it can also be directly used to treat all ordinary workers who are about to become ill or are approaching to be completely ill, or have almost reached a completely ill state. There are no physical age restrictions, and there are also almost no physical and mental conditions restrictions. Patients must live in the ward room of a private hospital, which has the strictest control over doctors, nurses and other medical and nursing department personnel. Often, they have to stay in another hospital house all the time. Whenever one of the patients has to go out of the ward by himself, the beautiful environment of outdoor plants can also be used for patients to quickly improve their mentality, Have another spiritual world where you can really relax and entertain yourself. Patients themselves can enjoy their activities in such an indoor plant environment atmosphere that is almost free from discrimination and threat, which can quickly reduce their inner pressure, tension and fear of tension, get a sense of inner peace and physiological satisfaction, and then help alleviate their tense condition, which is conducive to their recovery. Every horticultural plant used in horticultural production has its own plant growth and habits in different periods, which needs careful care and patient care. People who operate horticultural cultivation can also enjoy the harvest of physical materials and spiritual harvest in the process of planting. They can deeply experience all kinds of magical charm and infinite greatness created by nature, Let all plant operators have a strong sense of belonging, responsibility and enthusiasm for health, enthusiasm and optimism, especially for plant operators who are sick and injured. Therefore, in this horticultural activity therapy, not only can some patients, especially those who are easy to be injured, gradually recover, but also can make those patients recover their mentality and relax their nerves. There have been many methods of plant recovery treatment related to planting. It is mainly for operators to plant plants that can directly carry out plant photosynthesis activities to achieve the effect of recovery. These are all related forms of plant gardening recovery treatment[10-11].

### 2.3.2 Specialist Convalescence

The main diagnosis and treatment goal of specialized convalescent and health care rehabilitation hospitals should be to directly serve the health service group composed of patients with various complex chronic physical diseases, psychiatric patients, Alzheimer's patients, disabled patients and so on. It can effectively assist in the treatment of these elderly patients with chronic diseases. One of the most important diagnosis and treatment methods is to invest in the construction of a series of comprehensive rehabilitation intervention treatment projects and corresponding special functional rehabilitation equipment, activity playground and so on. For those convalescent patients suffering from various physical diseases, the main contents of their community construction model include the garden for patients with mental diseases, memory garden, garden for patients with visually impaired diseases, garden for children and so on. The group target faced by each landscape type of specialist convalescence is particularly concentrated and single, so it is necessary to have a strong pertinence in the design of environmental landscape, so that the curative effect is particularly significant and prominent [12].

### 2.3.3 Questionnaire Data Processing

Because the data of the questionnaire survey is not rigorous enough, the data of the questionnaire need to be processed to adapt to the version. The accuracy of missing value filling adopts the mean and standard deviation of individual absolute value deviation and the filling accuracy rate. The absolute deviation is the difference between the two data, and then take the absolute value. The calculation formula is:

$$LAD = \frac{1}{X} \sum_{i=1}^X |\hat{n}_i - n_i| \quad (1)$$

Where  $\hat{n}_i$  represents the interpolation value of the  $i$ th actual data obtained after filling, represents the real observation value of the  $i$ th missing data in the original complete data set, and  $X$  represents the number of missing cases of the whole scale in this simulation.

At the level of correlation and regression, the statistical method of multiple regression analysis is selected. The comparison of filling effect includes the mean and standard deviation of the average

repeated absolute deviation of the correlation coefficient of 50 simulations. Several variables and the scale score are selected for correlation analysis and multiple regression for each simulation. The calculation formula is:

$$RAD = \frac{1}{n} \sum_i^n |\hat{x}_i - x_i| \quad (2)$$

Where  $\hat{x}_i$  the estimated value of the  $i$ th regression coefficient obtained from the simulation, and  $x_i$  is the estimated value of the  $i$ th regression coefficient in the original complete data set.

Under the background of our country's highly aging population, the realistic problem that needs to be solved urgently is what kind of combination mode of raising and old age can be the most effective, which is in line with the national conditions of China's aging population. From the analysis of the advantages and disadvantages of several new modes of providing for the aged, The community home-based elderly care model will greatly reduce the survival pressure of the rapid aging of China's urban population and promote the comprehensive integration and harmonious development of the aging society, which is undoubtedly of great historical and practical significance. By analyzing and studying the overall development, current situation changes and the latest practice and exploration of the development center model of community public home-based service and comprehensive elderly care service, this paper will continue to deeply explore and analyze the essential problems of the common problems of community home-based elderly care model at home and abroad, and put forward some countermeasures and suggestions for the improvement and reform of community home-based elderly care model, And the important reality and impact of this on the active development of international community home-based elderly care model in some major domestic urban areas in the future.

### 3. Experiments

#### 3.1 Questionnaire Investigation

The questionnaire design provides the basis for the rehabilitation landscape design method of residential area under the background of later aging. The main content of the questionnaire involves two aspects: first, understand the main activity modes and behavior habits of the elderly in the residential area, summarize the main activity modes, time and venues of the elderly through the questionnaire survey, and combine the physiological and psychological characteristics of the elderly, Analyze and summarize the needs of daily activities and behavior habits of middle-aged and elderly people in modern residential areas, and understand their satisfaction with the residential environment; The second is to understand the elderly's understanding and acceptance of rehabilitative landscape, from which we can understand the application and development potential of rehabilitative landscape in residential landscape. The questionnaire social survey activity will adopt the random sampling questionnaire method of urban residents sampling questionnaire. Through random sampling, we will go deep into each rural community to investigate that most of the target population in an urban community are single elderly people aged 60 and a half or below or above, A total of 120 qualified written questionnaires were distributed through on-site sampling, and 113 valid questionnaires were issued. The effective recovery rate was 94.2%. Specific data are shown in Table 1

Table 1: Questionnaire

Place	Place A	Place B	Place C	Place D	total
Issued quantity	27	31	28	34	120
effective quantity	25	29	28	31	113
efficient	92.6%	93.5%	100%	91.2%	94.2%

### 4. Discussion

Figure 2 shows the data statistics of the questionnaire. According to the statistics, the basic characteristics of the sample are as follows:

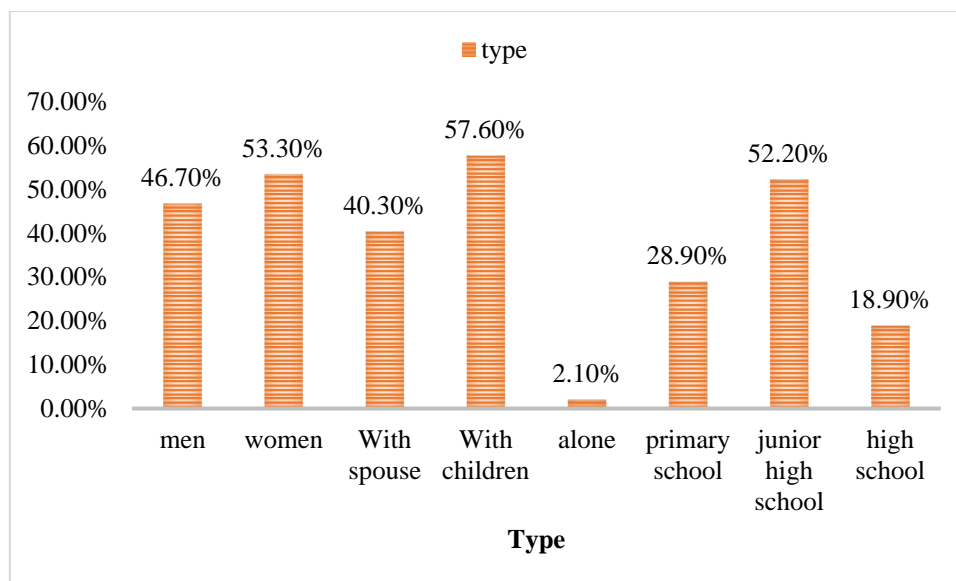


Figure 2: Survey data

#### 4.1. Gender and Age of the Elderly

Among the investigated elderly population, 56 were male, accounting for 46.7%; there are 64 women, accounting for 53.3%. 48 people aged 60-64, accounting for 40%; 33 people aged 65-69, accounting for 27.5%; 24 people aged 70-74, accounting for 20%; 12 people aged 75-79, accounting for 10%; 3 people aged 80 and above, accounting for 2.5%.

#### 4.2. Living Style of the Elderly

Among the respondents, about 40.3% live with their spouses, 57.6% live with their children or grandchildren, and about 2.1% live alone. Although this way of residential elderly care management can continue to maintain and continue the traditional Chinese family residential elderly care, which represents China's long tradition and characteristic culture, in terms of social management and overall form design, its children are busy with their work in addition to going to work every day in today's increasingly abnormal, fierce and cruel business society of China and modern China. In addition to study and social life, for retired elderly families who lack the ability to take care of family life, they still "have more than enough heart but less strength" at many critical times. It is not difficult to see that the community's demand for home-based elderly care is becoming increasingly prominent.

#### 4.3. Education Level of the Elderly

Among the families of school-age elderly people included in the survey, the total number of normal age elderly people without formal school status, who have received complete education below primary school, who have not attended school at or above secondary level, and who have received education above primary school and above secondary level, only accounts for 28.9%. The number of normal aged people with junior high school education or below can only account for about 52.2%, and the total number of normal aged people with senior high school education or above is equivalent to that of senior high school education or below can only account for about 18.9%. It can be seen that the overall educational level of the elderly in this community is not high, and they need to carry out more corresponding recreational and sports activities to enrich their lives.

Through the above questionnaires and exchange interviews with relevant objects, we have a deeper understanding of the development of home-based elderly care services in the community. At present, the development of home-based elderly care in the community is still on the road of exploration and needs to be explored step by step in practice.

## 5. Discussion

In order to make the elderly have a healthy and active life and a safe and comfortable environment in their later years, it is an inevitable trend under China's policy to carry out the construction of residential area suitable for aging under the home-based elderly care mode. However, in terms of the current outdoor environmental design of residential areas, there are still many problems in the design. The environmental quality of residential areas has an important impact on the physical and mental health of the elderly. Therefore, this paper takes the aging landscape design as the research object, and takes the scientific research framework of the national aging landscape design as the research background. After clarifying the needs of the elderly, carry out the corresponding design means to analyze the design compensation strategy, combined with the theoretical research and field investigation and analysis of the elderly apartment, summarize the experience and shortcomings that can be used for reference, and introduce the combination of rehabilitative landscape and environmental behavior theory to deeply analyze the design points and summarize the principles and points of aging landscape design. Finally, by applying the obtained principles and key design methods to the design practice projects of the elderly care community, flexibly using the obtained design principles and elements, fully considering the needs of the elderly in the elderly care community, and combining modern design techniques with the elderly care culture and local traditional culture, we can create a more livable community landscape environment for the elderly.

## Acknowledgements

This work was supported by The ministry of Education humanities and social sciences research project" project approval number 20YJCZH218" under healthy Chinese perspective integrate into the intelligent elderly housing space planning design research

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