

# The Use of Horticultural Therapy in the Design of Rural Recreation Space in the Context of Epidemic

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## Abstract

In the face of the aging trend in China, the social problems arising from it are beginning to emerge. In order to relieve the pressure of aging, the design concept of horticulture therapy is proposed, aiming to improve the psychological and physical health of the elderly through the combination of environment and design to achieve the effect of recuperation. The Covid-19 epidemic has brought shocks to the lives of the elderly, so it is important to pay attention to their physical health and psychological health, and the model of elderly care before and after the epidemic is also worth studying.

## Keywords

Healthy Aging; Wellness Space; Mental State; Horticultural Therapy.

## 1. OVERVIEW OF HORTICULTURAL THERAPY

### 1.1. Overview of Horticultural Therapy

Horticultural therapy differs from the treatment of the elderly in hospitals in that it aims to improve physical conditions through dynamic experiences and sensory experiences, and to promote the physical and mental health of the elderly by building a comfortable atmosphere and a good environment created by people and plants, thus achieving physical and psychological healing to relieve the pain of loneliness and illness [1].

### 1.2. Definition of Horticultural Therapy

It is a model of mutual healing to improve the physical and psychological well-being of the elderly by strengthening the interaction with the plants through participation in the growth process and careful cultivation. Through the different treatment methods, the elderly who are physically and mentally healthy, sub-healthy and sick can feel the therapeutic effects of horticultural therapy [2].

### 1.3. Sified Forms of Horticultural Therapy

The main categories are horticultural therapy, memory therapy, environmental therapy, and play therapy. Horticultural therapy is a form of treatment that allows the elderly to work to relieve their illnesses to improve their physical literacy. Memory therapy is expressed as an emotional garden that helps the elderly deepen their memories of novel emotions. Memory therapy in landscape design can provide a sense of comfort and intimacy. Environmental therapy refers to the rational planning and design of the landscape, the most common of which is the sensory garden, which is functionally a resting and playground for the elderly. Play therapy can make the whole landscape design more fun, so that the elderly can play freely in it. Play therapy should create more abundant play activities, so that the player's body and mind can be relaxed to achieve the effect of improving mood.

## **2. A STUDY OF THE DEMAND FOR HORTICULTURAL THERAPY IN THE CONTEXT OF AN EPIDEMIC SUB-SECTION HEADINGS**

### **2.1. Background Analysis of the Epidemic**

In 2020, a sudden outbreak of Covid-19 swept the world. Because of the rapid spread of the disease, the country has taken strict preventive and control measures to prevent the rapid spread of the disease. This has raised more questions about landscape design and how to solve the problems in this special period.

### **2.2. Analysis of the Post-epidemic Recreational Space Model**

In the major event of safety and health, if the interior design not be appropriate enough, it may lead to the spread of illnesses among the elderly. It is important to combine horticultural design with the design of horticultural therapy to create a recreational space that can respond to a major health event. At the same time, we need to do a comprehensive campaign to prevent and control the epidemic, to help the elderly ease the impact of the epidemic, and to help them build confidence.

## **3. THE NEED FOR HORTICULTURAL THERAPY IN THE CONTEXT OF THE EPIDEMIC**

### **3.1. Landscape Design in the Context of the Epidemic**

The coronavirus spreads very fast and is also very contagious, so it is important to properly and safely isolate infected patients. Rational planning of the landscape can achieve the safe distance, can relieve people's physical discomfort and psychological anxiety. Greenery can effectively inhibit the spread of bacteria and purify the air, the role of plant landscape for the prevention and control of the epidemic to achieve a positive effect with.

### **3.2. Formation of the Concept of Healing Landscapes after the Epidemic**

The design of a post-epidemic retirement space is an issue for designers to consider, as the healing landscape plays a positive role in regulating physical and mental health after the epidemic. In the design of the landscape, plants should be integrated into the humanized design, and the healing landscape needs to be thought of from multiple perspectives, bringing diverse and comprehensive feelings to people. Such a landscape brings pleasure to the elderly.

## **4. THE USE OF HORTICULTURAL THERAPY INTO THE DESIGN OF RURAL RECREATION SPACES**

### **4.1. Design Basis for the Needs of the Elderly**

Nowadays, the material life is rich, we need to meet the needs of the elderly from different aspects of life, we need to meet the needs of the elderly according to their different needs, so we need to design from the psychological and physical level to meet the design needs of the elderly.

### **4.2. Rural Retirement Living Space Environment Design Objectives**

#### **4.2.1 Creating a health-conscious living environment through horticultural therapy**

The emergence of horticultural therapy can ease the living environment of the elderly, allowing them to interact with plants more intimately in the environment. We aim to design a variety of activities for the elderly to relax their bodies and to improve their health and wellness while experiencing the natural scenery.

#### 4.2.2 Provide a variety of activities through gardening activities

To increase attention to the physical and mental health of older adults through gardening activities, it is important to provide a variety of activities to help improve the efficiency of older adults' activities. Since older adults are now more active than ever with walking and dancing, there is a need to provide a wider variety of activities to motivate them to exercise.

## 5. RURAL RECREATION SPACE DESIGN PRINCIPLES

The design principles of recreation space are different from those of ordinary space design. We need to design the recreation space according to the principles of functionality and recreation and health care co-creation, the principles of natural environment and plant configuration, deep communication in many aspects and the principles of different locality to meet the design needs of recreation space.

### 5.1. Functional and Recreational Health Care Type Co-creation Principle

To achieve the principle of co-creation of functionality and health, we need to add plants and stimulation to assist the physical and mental health of the elderly. Therefore, it is necessary to combine horticultural therapy and apply it to the landscape design to increase the principle of functional and health co-creation for the elderly living environment.

### 5.2. The Principle of Rationality of Natural Landscape and Plant Configuration

Many senior living environments do not take into account the combination of natural landscape and plant configuration are only designed to achieve the surface landscape effect, have ignored the natural environment and atmosphere of plants to create, so in the design of the design needs to pay attention to the rationality of the design, according to the existing natural environment to design, in the effectiveness of plants to achieve the protection of the elderly.

### 5.3. Different Geographical Suitability Principles

Different recreation spaces need to be designed according to different regions. Due to different regional cultures, the psychological and physiological aspects of the elderly are also different, and the character and behavior of the elderly are different due to the influence of different regions and customs.

## 6. RESEARCH ON THE DESIGN OF DIFFERENT RECREATION SPACES

### 6.1. Urban Community-based Space Design

The urban community is a place that can provide a rich and varied life for the residents. Because of the dense population of elderly people in China's cities and the current lack of activity space design, the area of activity space can be appropriately increased to meet the needs of the elderly. The different functional areas can be separated, with living space, recreation space and community activities as the main ones. The elderly with physical disabilities in the recreation space need to be accompanied by nursing staff to carry out activities, and they can observe community activities during their activities. The elderly in treatment need a quiet environment, so the design uses a quiet and private environment and increases the installation of barrier-free bathrooms. The design of the pavement is mainly made of wooden boards to create a warm atmosphere and eliminate the resistance of the therapists; the floor pavement is set with different styles of floor tiles to enhance the sense of direction of the space.

## 6.2. Small Town Form Space Design

At present, China's recreation town can be broadly divided into cultural recreation, medical combination, ecological health and other types. Recreation town and ordinary town will be different, the function is mainly recreation function. However, the spatial design of the town should be based on the function of recreation and health, and should be designed through different forms and existing resources.

## 6.3. Rural Recreation Space Design

In the face of the urban retirement dilemma, rural recreation needs to provide diversified rural retirement services for the urban elderly, and create rural recreation spaces with local customs, special culture and rehabilitation design. Therefore, villagers have taken the initiative to vacate their vacant houses and collective land to relieve the pressure of urban elderly.

## 6.4. Forest Recreation Space Design

Forest therapy is a relatively new treatment option in recreation design, which is to promote the health of the body through the factors in the forest environment that are healthy for the human body. Forest recreation aims to restore physical and mental health by incorporating sports, plants and specific activity spaces in a forest environment. The selection of walking and recreation facilities (such as activity spaces and sports fields) should be designed according to the local environment. The route of walking should be chosen by water and beautiful environment, and a reasonable route should be chosen and designed by combining the characteristics of the forest environment itself.

# 7. INNOVATION IN THE DEVELOPMENT OF HORTICULTURAL THERAPY IN RURAL RECREATION SPACE

## 7.1. Combining Traditional Chinese Culture for Landscape Creation

Chinese medicine is a unique treatment method in China, and the treatment methods are very diverse. One of the essential is Chinese medicine, the role of Chinese medicine has the effect of clearing heat, blood, Qi, etc. The active ingredients emitted from Chinese medicine can react with the body's functions to have a recuperative effect. It can be done by massaging different acupuncture points in the body to connect the various organs of the body to produce nerve reflexes to prevent disease and unblock the meridians.

## 7.2. Adding Rustic Elements Inside the Water Body

In the past, the water landscape design is basically using dynamic water, like waterfalls, fountains and so on. Nowadays, the elderly need a quiet environment, so the design can be used in the combination of static and dynamic way to create an idyllic water landscape. That is, in the dynamic water to add static water, water landscape can add sculpture of animal playing and foraging, to add the fun of the whole landscape to add a sense of idyllic.

## 7.3. The Addition of Different Recreational Landscapes

The design of the whole space needs to add different landscapes. Among them, the activity space should have tool and tool-less equipment area, that is, according to the different physical condition of the elderly to design their exercise activity area. And the space can be divided into private and open, so that the elderly can move freely. In addition, the design of garden landscape can be added. The elderly need to exercise every day to relieve disease or relaxation, landscape design, if added to the garden landscape design, it can be done to add comfort to the entire landscape design, so that the elderly in the exercise in the psychological better relaxation [3].

## 8. A CASE STUDY OF HORTICULTURAL THERAPY INTEGRATED INTO A WELLNESS SPACE

The Troncoville Garden "Lush" is one of the first to use horticultural therapy and interior design to achieve healing and healing effects. The most striking aspects of the design are the floral garden and the exhibition garden, which were created to meet the needs of different groups of people. The first is the floral garden, which provides a space for the elderly to grow plants and communicate with them in a beneficial way. The planting area allows seniors to participate in the entire process of growing plants, including vegetables, fruits, and herbs, allowing participants to relax and feel a sense of accomplishment. In the floral park, there is also a store area where seniors can buy the crops they want to grow as well as various tools and so on [4].

Next is the exhibition park, which is divided into three theme gardens: "Garden of the Heart", "Garden of the Strange" and "Travel Garden". The "Garden of the Soul" is an aromatherapy garden that uses plants to stimulate the five senses of the elderly with their unique scents and colors to achieve the effect of alleviating diseases and promoting physical and mental health. The "Garden of Wonders" allows seniors in different states of physical illness to engage in gardening activities, allowing them to relax and play while making gardening crafts to better integrate into the environment. The "Travel Garden" is a combination of travel and the use of reasonable color combination of plants to relieve the psychological illness of the elderly.

## 9. CONCLUSION

Due to the aging problem and the resulting problems in the elderly, it is necessary to analyze the physical and psychological needs of the elderly in combination with the needs of horticultural therapy in greater depth. The design application of horticultural therapy in the design of recreation space can solve the problems such as the lack of humanized design and unreasonable allocation of resources in recreation space. In the context of the epidemic, the demand for horticultural therapy to be integrated into recreational spaces for the elderly has increased, and the design principles of functionality, locality, ornamentation and health care should be added according to the needs of the elderly. The use of horticultural therapy proposed in this paper is to increase the activities of the elderly according to their needs, to involve them in horticultural activities, to improve their physical health and mental health, and thus to meet their living and spiritual needs in the recreational space.

Physiologically, we need to ensure that the elderly in different physical conditions can participate in activities to increase the sensory stimulation to relieve and improve the physical condition of the elderly, and psychologically, we need to reduce the pressure of the elderly and help them to build up confidence. Therefore, we need to combine the landscape design with the needs of the elderly to design a more suitable living space for the elderly to live in a warm atmosphere so that the elderly can spend their twilight years in peace.

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