Rehabilitation Landscape Design in The Community Environment--Take Xintiandi-Blue Diamond Community as An Example

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Abstract. Today's society is fast-paced and people are under a lot of pressure from work and school. They live in a space built of steel and concrete, separated from the natural environment for a long time. The fierce social competition has led to anxiety, negativity and other negative energy. The incidence of sub-health diseases and chronic diseases is increasing. As the world's most populous country, China is now facing an accelerating aging process. People are beginning to re-examine their psychological and social behaviors in their daily lives and are becoming more aware of the importance of the natural environment to human health. As the most frequently used activity space in people's daily life, community environment is undoubtedly the best place for people to relieve their emotions and relax. It is important to study how to integrate healing landscape into community environment design to improve the physical and mental health of urban residents.

1. Project Overview
Xintiandi-Blue Diamond Community is located in Xixian County under Xinyang City, Henan Province. The project site is located on the south side of Luohuai Road, north of Lixiang Avenue and west of Longhu East Road (Figure 1). It consists of a nearly square plot enclosed by commercial buildings along the street and a number of residential buildings facing south and north, with a planned total land area of about 15898.88 m², a planned total green area of about 7099.74 m² and a plot ratio of 1.75. The project site is surrounded by relatively good road conditions. It is close to Luohuai Road, the main traffic line of the city, with convenient transportation, and close to Longhu Park, with beautiful natural environment. A large number of residential communities have been built in the surrounding area, forming a very good living atmosphere.
This design examines the current general planning, architectural form, spatial level and traffic flow of the site. It makes full use of the existing resources of the site, based on the physiological and psychological needs of different user groups, and provides a reasonable planning and design for the landscape in the community. It attempts to use the rehabilitation-style landscape to implement into the design, making the site a physical and mental healing base for the elderly, a growth paradise for children, and a leisure garden for young people.

2. Healing landscape design for the community

2.1 Overall layout

The design is closely integrated with the theme positioning, guided by the theory of rehabilitation landscape, with the aim of natural, harmonious and beautiful human living environment, with the health of the occupants as the goal, with the systemic nature of landscaping and the sustainability of the plant landscape as the theme as the mission, to achieve systematicity in plan, hierarchy in space and relevance in time. The overall layout pattern of the community incorporates familiar traditional Chinese cultural elements and strives to create a healing community landscape with Chinese characteristics (Figure 2).
According to the functional needs of the plot, the functional zoning is designed in accordance with the principles of humanization and rationality to facilitate the use of different residential groups. It is mainly divided into main entrance landscape area, secondary entrance landscape area, central activity area, quiet leisure area, children's area and commercial landscape area (Figure 3).

The different landscapes are linked together to form a landscape sequence, forming a landscape structure of "one hall, two axes, three gardens and many nodes" (Figure 4).

"One Hall": Using the main entrance space area in the south to create the Lanqing Liyue Hall.

"Two axes": The primary landscape axis runs from east to west through the east and west sides of the community and the central group of green areas. The secondary landscape axis runs from south to north through the community's main entrance landscape and secondary entrance landscape.

"Three Gardens": According to the design positioning and functional layout planning, the main landscape axis in the east and west direction is divided into "Welcome Plum Garden", "Sea Rain Pavilion" and "Children's playground". The landscape viewing area is mainly in the "Welcome Plum Garden", the leisure activity area is mainly in the "Sea Rain Pavilion", and the children's activity area is mainly in the "Children's Playground". Different areas meet the needs of different people, providing residents with a comfortable, leisure and pleasant place for physical and mental activities.

"Multi-node": All four main landscape spaces are surrounded by multiple nodes. Landscape nodes are created through plant configuration, spatial division, characteristic landscape vignettes and structures, and are connected through landscape axes.
The road traffic includes two parts: vehicular road and pedestrian road (Figure 5). The residential area is divided into pedestrian and vehicular traffic, and an underground parking garage is set up to separate pedestrians and vehicles to the maximum extent and reduce the safety hazards inside the residential area. Reduce the number of above-ground parking spaces, increase the green area, and provide a comfortable, harmonious and beautiful living environment for residents.

2.2 Rehabilitative community space environment creation

2.2.1 Lanqing Liyue Hall

Lanqing Liyue Hall is located on the south and north secondary landscape axis directly opposite the main entrance of the project (Figure 6). The entrance of the community, as part of the community, is the link between the community and the outside world [1]. Therefore, the entrance of the community should be identifiable and standard in terms of function, and it needs to make the residents feel humanized care and the sense of belonging to home in terms of emotional and psychological needs.

- Symmetrical scenic walls are set up to create an axis with a sense of ritual order.
- Dynamic water fountain is used, the sound generated to block the noise in the space environment, improve the microclimate of the space area and eliminate the fatigue outside. It can have a positive impact on human emotions, with people in a pleasant, joyful mood.
- The traffic organization divides the outdoor activity flow and home flow by planting belt.
- Warm-toned paving materials are chosen to make people who come home feel warm.

2.2.2 Sea Rain Pavilion

Sea Rain Pavilion is located on the west side of the main landscape axis in the east and west of the project and is a quiet and relaxing space for the community (Figure 7).
A set of large porches was set up. Inside the gallery is a sunken sofa, and by using the surrounding plants to enclose it, it forms a semi-private space for communication and rest, creating a resting place for the elderly and other people to talk with others. On one side of the corridor is a plunge pool, and on the other side is an open green space, where resting and thinking can bring people a sense of open-mindedness.

The central green space on the east side of the corridor is the public activity space of the community. Residents can engage in various activities here, thus creating different psychological needs. For example, setting up an open activity space can meet the psychological needs of the elderly for tai chi, gymnastics, dancing, etc.

Design safe exercise equipment in it and mark the instructions for use next to it so that both the elderly and other people can exercise more scientifically [2]. Other people can also do outdoor activities in this area to meet their needs of sunbathing, resting, communicating with each other, relaxing, exercising, etc.

With grouped plants and warm lawn, it provides people with a relaxed and comfortable activity place and creates a lively and harmonious activity atmosphere.

2.2.3 Welcome Plum Garden
Welcome Plum Garden is located at the intersection of the main landscape axis in the east and west of the project and the secondary landscape axis in the south and north, as the central activity area of the community and the core of the whole community (Figure 8).

Static water features are set up to help people soothe their emotions and bring them a state of mind of tranquility, openness and calmness. It echoes the dynamic fountain in the main entrance of Lanqing Liyue Hall, so that there is movement in stillness and stillness in motion.

The traditional pavement under the water is generally the use of the same specifications, color paving materials for full pavement, the results of time, less maintenance, the pool will become a gray "garbage pit" [3]. Therefore, in the design of the pool pavement, the bottom of the pool and the pool wall pavement as an ornamental surface to consider. It should be in accordance with the overall design of the square paving pattern, choose easy-to-clean paving materials, to facilitate long-term maintenance of the waterscape effect. At the same time, by matching with landscape stones, neon lights and other small facilities, it provides a different landscape environment for the residents.

A large lawn is set up in the center of the water surface and connected by a walkway. It provides a platform for the residents to get close to the water and eliminate the pressure of body and mind.

Using the resting platform next to the static water feature, movable planting flower boxes are set up to plant some vegetables, fruits and some vigorous wild flowers that are easy to survive and cultivate. It increases the motivation of the elderly to participate in activities with other people in the community and enables the residents to gain satisfaction and self-identity from the planting activities [4].

Figure 7. Sea Rain Pavilion (self-made by the author)
2.2.4 Childhood playgrounds

Childhood Playground is located on the east side of the main landscape axis of the east and west of the project (Figure 9). For children their sensory stimulation will be more sensitive, and their curiosity and exploration of new things wash more strongly.

- Using changes in the topography, a flexible, interactive, comprehensive space that enables children to interact with the natural landscape and is compatible with both individual meditation and group activity fun is created.
- Contrasting, colorful, transformative, and appropriately scaled landscape elements are utilized to attract and stimulate children to interact and explore from all aspects of sight, sound, touch, and smell [5].
- The layout of the planting forms channels and enclosures that can also bring a sense of mystery and exploration to children. The planting of plants of appropriate height and the presence of plant names and profiles in front of many flowers and trees can make children interact with the plants and increase their educational significance.
- Various animals and animation-related landscape vignettes are set up, which also add a lot of fun to it. Adding some play items that children can work together to complete, such as sand pits, swings, etc., can also improve children's teamwork skills. Through these rich planting and diverse and interesting landscape and vignette designs not only make children's bodies move, but also relax and stimulate childishness in the process of playing, so as to get healing and restore health.
- Children's activities can bring vitality to the elderly. Whether it is interacting with children or just watching children's activities, etc., it can bring much comfort and happiness to bring the elderly spiritual world [6].
3 Conclusion
In this paper, the theoretical principles of healing landscapes are integrated to address the use of healing landscapes in community environments. This paper will bring the rehabilitation landscape into the homes of ordinary people, allowing them to participate in the public environment of the community and experience the benefits of the rehabilitation landscape. Let the disadvantaged groups can also go out of their homes to enjoy the fun brought by nature.

The research and development of horticultural therapy and rehabilitation landscape in China is still in its initial stage, and we still need to learn from many foreign countries that have mature experience. In the future, we need more practice to prove the feasibility and effectiveness of rehabilitation landscape in the community environment, and hope that rehabilitation landscape can be used in a wider range of fields, not only in the community environment, but also in city parks and squares to provide more help for those special people, the elderly or children.

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