

Study on the Development and Countermeasures of Urban Parks in the Post-epidemic Era

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Abstract: City park is a large-scale and centralized comprehensive activity space which is open to residents free of charge, and is mainly for leisure and entertainment. It is also a place for holding some cultural activities and gatherings. During the epidemic, urban parks have more significance. In the post-epidemic era, urban landscape design has become particularly important, not only to provide leisure and entertainment space environment and green and pleasant natural environment to meet people's physical and mental health. It is more important to consider the need for proper independent space and a safe social distance. From the perspective of landscape design development in the post-epidemic era, this paper takes urban parks as an example to study, and puts forward corresponding countermeasures and specific implementation modes.

1. Introduction

Since the outbreak of the COVID-19 epidemic in 2020, the international economic development has suffered a huge blow, and the global economy has shrunk dramatically. In this case for a long time, people pay more attention to the pursuit of spiritual level and explore the harmonious coexistence between man and nature. Therefore, in the post-epidemic era, urban landscape design has become particularly important, not only to provide leisure and entertainment space environment and green and pleasant natural environment to meet people's physical and mental health. It is more important to consider the need for proper independent space and a safe social distance. With the improvement of people's living standards, urban parks are endowed with more functions [1]. For the landscape design of green park, we should follow the scientific theoretical basis, rationally standardize the landscape green space, improve the cultural and artistic quality of the site, and meet people's related needs.

2. Significance of urban park development in post-epidemic era

The epidemic situation in COVID-19 has seriously threatened public health, and the important value of public green spaces such as parks has been highlighted. First of all, the park green space itself is an important place to resist all kinds of disasters, evacuation or temporary resettlement, and the green space can be used as a space for epidemic prevention and emergency use to solve the

problems of medical isolation and insufficient treatment space caused by the epidemic; As an important part of public green space, urban parks have become the focus of scholars' attention. How to develop residents' park life oriented to health and epidemic prevention in the post-epidemic era has become a hot topic.

City park is a large-scale and centralized comprehensive activity space which is open to residents free of charge, and is mainly for leisure and entertainment. It is also a place for holding some cultural activities and gatherings. During the epidemic, urban parks have more significance [2-3]. In the post-epidemic era, the design of urban parks should integrate local culture and art, so that people can cultivate their sentiments and improve their cultural accomplishment. City parks can re-channel the traffic of original blocks, awaken new vitality and enhance the economic vitality of surrounding businesses. The landscape design of public space needs to follow the unique development law of ecological environment, effectively introduce green elements and run sustainable development through all design links, so as to improve the layout of road organization, the distribution of green space system and the planning of residents' communities.

3. Analysis of urban parks in the post-epidemic era

3.1. The quality and quantity of green space cannot meet the needs of residents

First of all, the per capita green area in the old community is low, and residents' travel is limited during the epidemic period. Secondly, the quality of green space is not high, which cannot meet the diverse activities needs of residents. Thirdly, the planning of green space and other spaces in the community is unreasonable, and the intersection of streamline and mixed functions increase the risk of virus infection for residents in the community. A large number of people gathered in green space is not conducive to the prevention and control of epidemic situation. Finally, at present, the landscape of the community garden is mainly to meet the basic activities needs of residents, but it cannot focus on alleviating the negative emotions brought by the epidemic.

3.2. Landscape content lacks personalized design for epidemic situation

The goal of urban designers is to create a place where people feel welcome, comfortable and safe. Public space is an important research field, and public views may determine what design is and how to design it [4]. In the post-epidemic era, what changes can urban parks make to improve tourists' safety perception, such as park landscape, park facilities, park management and so on. The traditional park landscape content lacks targeted design directly related to epidemic prevention and control, or the rare epidemic-related elements are mostly superficial and superficial, lacking innovation and interest, which leads to residents' inability to reduce their psychological awareness and achieve the preset relaxation purpose, let alone the sensitivity of the landscape.

3.3. The landscape layout is not systematic

After the outbreak, the frequency of people's activities in outdoor green space has generally increased, especially the behavior of walking and cycling has increased significantly [5]. These findings obviously have a certain guiding role in the planning and management of green space in the special period of the epidemic. When designing local public landscapes, the spatial changes in the process of urban development were not taken into account. Now these landscapes can only meet some needs, which leads to their low application value and utilization rate. At the same time, the existing green space distribution is relatively chaotic and lacks exploration. The overall quality of the street environment means that in the miscellaneous design of the street, there are few places that

citizens can go to, which leads to the lack of a whole room where people can stay safely in the street and the lack of buffer for social functions.

4. Development and countermeasures of urban parks in post-epidemic era

4.1. Traffic moving line design

When designing a city park, we should give full consideration to the pedestrian flow in the park. Reasonable route planning can also ensure people to play as much as possible in the park, ensure the smoothness of the crowd, avoid congestion, and help the park staff to take emergency epidemic prevention and control measures, thus effectively controlling the social distance of the crowd [6]. Urban park road system is the link between functional zoning, building facilities and scenic spots. Garden road types usually include main roads, secondary roads, dedicated roads and promenades.

The paving material of boundary space also affects people's space experience when walking traffic. The texture, shape, degree of light reflection, laying form and collocation method of materials will have different psychological implications for users. In landscape design, designers often use different paving forms as a way to divide space, or use guided paving design to guide tourists' travel route [7].

In view of its rugged roads, it is not recommended to rebuild its road paths, because it is necessary to maintain its original forest spatial characteristics. In this case, some small spaces can be opened at intervals on both sides of the road, which can be lawn spaces or wooden rest platforms to encourage people to stay here and fully enjoy the recuperation function of the park forest oxygen bar. In order for passing tourists to find out in time, we can choose some areas with sufficient sunshine or areas with strong plant enclosure effect to meet the leisure preferences of different groups of people. The layout should be adjusted according to the content of urban parks and the capacity of tourists, and the priority should be clear and local conditions should be adjusted (Figure 1).



Figure 1: Traffic moving line design

Park city regards people, city and industry as an interconnected and interactive ecological system, which promotes the continuous evolution of the system with the healthy development of people,

city and industry, and finally realizes the high harmony among people, city, environment and industry [8]. Combined with the new zoning mode, it is necessary to supplement the emergency isolation block fast track on the original road network construction idea, separate it from the sightseeing path in the park, reduce the intersection and avoid interference, and choose the straight line mode as far as possible to meet the efficiency and convenience of vehicle first aid and personnel commuting, and the guide system and paving method should also be partially clarified according to actual needs.

4.2. Configuration of rehabilitation landscape plants

The boundary space of urban park green space is located in the gray area of urban municipal management and urban park management, which often lacks the corresponding effective management and maintenance, resulting in the decline of the landscape quality of the space and the loss of users [9]. The space construction of the boundary space can't pursue the degree of space closure excessively, but also needs enough sunshine to enter, especially for the elderly residents in the city. Providing enough sunlight in some leisure facilities is of great help to the health of tourists who have a rest here.

During the epidemic period in COVID-19, many people stayed indoors due to strict control and closure. In this case for a long time, people's activities are limited, and socialization only comes from the Internet and rumors, which often produces negative psychology such as anxiety and depression, and the spirit is under pressure. After the epidemic, people pay more attention to the pursuit of the spiritual level. Therefore, it is inevitable to build a green and healthy lifestyle. Shrubs and green belts with different heights can be used to divide the space reasonably, and different plants can be used to enclose different private and healthy places, and plants with air purification, dust prevention and noise reduction can be used to create a green and healthy space (Figure 2).

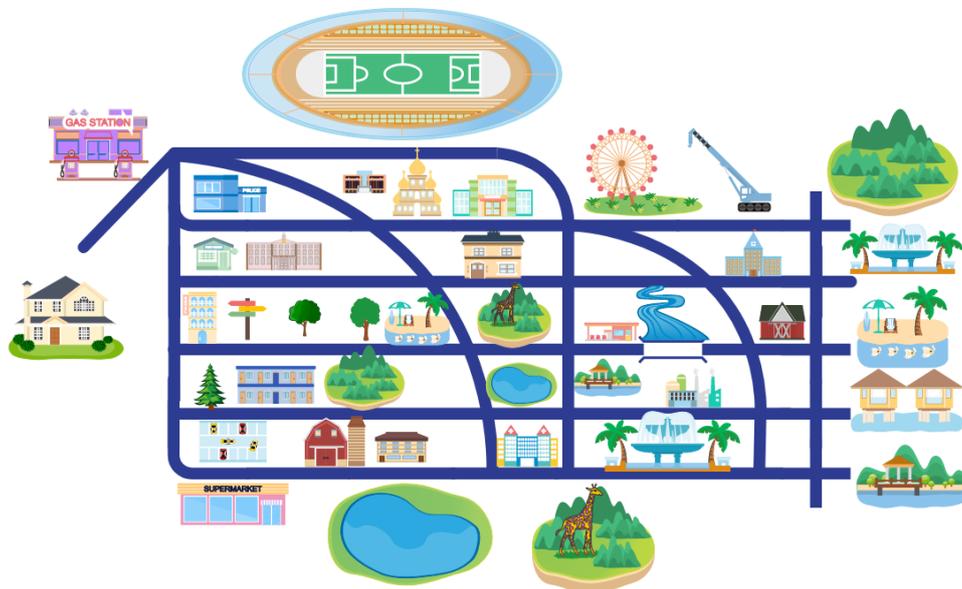


Figure 2: Configuration of rehabilitation landscape

Rehabilitation landscape helps people release stress and relax through its unique efficacy, and provides comfort and support from both mental and physical aspects. Under the national environment of "Healthy China", it is of great significance to improve its application scope, make its clients face the whole people and conduct relevant research and investigation.

Urban green public space serves residents, so we should avoid setting too many roadblocks and

stairs, pay attention to the smoothness of space roads, and facilitate people to reach their destinations quickly. Secondly, leisure and entertainment facilities and emergency rescue facilities are added for people to communicate, and at the same time, the rapid transmission of information under the epidemic situation is guaranteed. For example, chess and card rooms and various ball sports venues are changed into communication rooms, nucleic acid testing sites and shelter bases under extraordinary circumstances. Reasonable planning and arrangement should be made for the landscape park along the lake, so as to get through the broken road, solve the problems of poor cleanliness and so on, and better realize the utilization of the park landscape resources. The dynamic experience should be arranged with new ecology and new angles, and the green ecology should run through the whole project, emphasizing the theme characteristics of the project's green ecology.

4.3. Optimize the overall layout of the park

In the construction technology of residential garden, we can seek the help of professional team through the strength of residential area and property. Different communities can also share experiences and exchange ideas with each other. If face-to-face sharing is not convenient due to epidemic prevention, you can use the well-run online platform "Cloud Sharing" and use the recorded micro-lessons and micro-videos to repeatedly play the learning practice.

The cultural landscape has changed from the original flat visual information transmission, into sound, light effect and interactive devices, and from the original static sculpture to the dynamic transformation of the cultural landscape timeline, which has brought visitors a strong sense of experience and greatly extended the stopping time of tourists. Therefore, in the post-epidemic era, the government and relevant functional departments should fully realize the importance of public participation in community construction, social interaction, cooperation and sharing, rewrite the public awareness and potential of space, and build a healthy, harmonious, mutually promoting and participatory community building model.

Optimize functional zoning, divide different blocks, such as static space, communication space, sports space and viewing space, to meet the interests and needs of different ages and all walks of life, and build colorful community space. Finally, in terms of environmental facilities, such as sanitary facilities, garbage bins are located on both sides of roads and where people stop to concentrate, and the shape design of garbage bins is optimized to decorate the environment and highlight regional characteristics [10]. Deepen people's influence on this aspect and improve people's awareness of protection. The main purpose of the future city park design is to build it into a place close to life and full of cultural and artistic atmosphere, which will make everyone's life full of fun.

5. Conclusions

The epidemic situation in COVID-19 has seriously threatened public health, and the important value of public green spaces such as parks has been highlighted. In the post-epidemic era, the design of urban parks should integrate local culture and art, so that people can cultivate their sentiments and improve their cultural accomplishment. City parks can re-channel the traffic of original blocks, awaken new vitality and enhance the economic vitality of surrounding businesses. In the post-epidemic era, the awareness of landscape special design for epidemic situation has become a consensus. Based on this development trend, the innovation of urban park landscape design should understand its changes from subtle aspects, cultivate new machines in the crisis, open up new opportunities in the changing situation, and truly adjust to meet the needs and innovate in line with the times.

References

- [1] Gan Guanlan. (2019). *Landscape Design of Urban Parks*. *Shanghai Textile Science and Technology*, 47(2), 1.
- [2] Chen Manhua, Zhao Peng, Yu Wei. (2020). *Blue-green interweaving, urban landscape blending-the planning and design of Ningbo Yinzhou Central Park*. *China Garden*, 36(2), 37-40.
- [3] Wang Zhifang, Zhao Yan, Hou Jinling, & Zhang Bo. (2017). *Suggestions on herbaceous design of urban parks based on landscape preference research*. *China Gardens*, 33(9), 7.
- [4] Wang Yujie. (2020). *The application of psychology in urban park landscape design*. *Architectural Science*, 36(3), 3.
- [5] Wang Jing. (2010). *Design of urban strip parks under the guidance of landscape nodes*. *China Gardens*, 200(004), 026.
- [6] Xiang Hongmei, Xiang Hongcheng, Hu Qihua. (2014). *Design and Implementation of Urban Integrated Surveying and Mapping System with Integrated Production Management*. *Surveying and Mapping Bulletin*, 2014(8), 105-108.
- [7] Li Junqi, Yan Xiaowen, Wang Yaotang, Wang Wenliang, & Zhao Fengchang. (2020). *Urban park green space planning and design method based on rainwater storage and drainage and case analysis*. *Water supply and drainage*, 46(4), 7.
- [8] Liu Qingying, & Ma Jiangping. (2020). *Landscape Design of Urban Parks under the Construction of Sponge City — Taking Shanghai as an Example*. *Bulletin of science and technology*, 2020(2), 4.
- [9] Tong Zhiming, & Ma Yun. (2021). *Application of Regional Culture in Landscape Design of Urban Parks*. *Industrial Architecture*, 51(2), 1.
- [10] Wu Tianjie, Zhuo Zhixiong, Zeng Zhen, & Wu Xiaogang. (2022). *Study on the influence mechanism of the restorative effect of pocket parks in the post-epidemic era-based on visual perception*. *Journal of Southwest University: Natural Science Edition*, 44(11), 11.