

# Discussion on the Design Strategy of Shenyang Pocket Park from the Perspective of Child-friendly Health

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**Abstract.** During the 14th Five-Year Plan period, China proposed to build 100 child-friendly pilot cities. All regions are encouraged to actively carry out the construction of open Spaces such as pocket parks and children, add activity venues suitable for children, and allocate recreational facilities to further promote the construction of urban child-friendly Spaces. Based on this, this paper analyzes the current situation of Shenyang Pocket Park, and puts forward six design improvement strategies from four dimensions of accessibility, safety, interest and comfort, so as to provide new ideas for the construction of child-friendly pocket park.

**Keywords:** Child-friendly, pocket park, humanization.

## 1. Research Background

During the 14th Five-Year Plan period, China proposed to build 100 pilot child-friendly pilot cities. In 2023, the Ministry of Housing and Urban-Rural Development jointly with the National Development and Reform Commission and the State Council issued the <city children friendly space construction guidelines (trial)> implementation manual, encourage regions actively develop urban pocket park open space construction and fit, add suitable for children, and configuration recreational facilities, further promote the construction of urban children friendly space.

With the rapid development of Chinas urbanization, the urban development of Shenyang has entered a new stage of "reducing quantity and improving quality" and "stock renewal". As the first batch of urban renewal pilot cities and the second batch of children-friendly construction cities, Shenyang is a practice of "child-friendly" urban space design is an inevitable trend of development. As a part of the urban green space system, the pocket park exists in the form of "dots" in the urban public space, and a good urban public space can form a space system suitable for childrens travel and outdoor activities through the combination of points, lines and surfaces. The construction of "children-friendly pocket park" will be conducive to the promotion of the construction of a child-friendly city, and constantly improve the urban function layout, so that Shenyang can develop into a high-quality city.

## 2. Related Concept Analysis

### 2.1. Children-friendly City

The concept of "child-friendly city" was first proposed by UNICEF in 1996 [1], advocating the improvement of urban living environment to meet the needs of childrens various behavioral activities in the city. The needs and childrens decisions into the urban planning system fully reflects the rights of children. Currently, more than 400 cities around the world are certified as "child-friendly cities", and the number continues to increase by [2].

### 2.2. Child-friendly Landscape

Child-friendly landscape refers to creating the landscape environment with children as the core and ensuring childrens rights and interests and meeting childrens needs. In the design strategy, childrens needs are fully combined with landscape elements to create a space environment suitable for childrens physical and mental development.

### 2.3. Pocket Park

Pocket park, also known as pocket park, mini park and close-fitting park, is an urban plaque scattered open space with small area, discrete distribution, flexible location, area of 100~2000m<sup>2</sup>, equipped with green planting, mainly with plant landscape, highlighting the plant landscape. At the same time, according to local conditions, leisure seats, dustbins, street homes and other convenient service facilities, open green space with the function of rest and communication, the main forms include small green space, small park, street garden, and small community sports field [3].

## 3. Analysis of Child Friendliness in Shenyang Pocket Park Construction

As an important urban activity space for urban residents, Pocket Park can not only provide rest space for passers-by, but also be an important place for childrens daily activities and games. The construction of pocket park plays a vital role in improving the friendliness of urban children. Therefore, it is necessary to comprehensively consider the different physical and psychological needs of children and adults in the design, analyze the psychological activities of children and actions, and set up the corresponding activity space for children of different ages, so as to ensure that children can play safely and comfortably in it.

Since 2021, Shenyang city has vigorously promoted the construction of pocket parks, and put forward the plan of "Shen Shangshui Zhiyang 3000 Park" to renovate the old residential areas, street green space, urban main roads and densely populated corner land, abandoned land and idle land, so as to create a pocket park with diverse functions. Up to now, more than 3,070 pocket parks have been built, ranking the largest number in China. In this paper, a total of 36 pocket parks were selected from 8 districts in each district as samples for field investigation. The 36 are built, around the surrounding school children, representative pocket park, analysis of their surrounding environment, internal space, amusement facilities, humanization, and so on and so forth, summarizes the four dimensions of pocket park children friendly: accessibility, safety, interest, and comfort, and put forward six design promotion strategy.

### 3.1. Problems

Problem 1: uneven distribution and insufficient quantity

The 36 pocket parks selected in this survey are all nearby including primary schools or kindergartens. However, there were 1100,193 people aged 0-15 in the seventh census of Shenyang, proving that the urban space of Shenyang is extremely lack of child friendliness. Children can play healthy games and fun activities anytime and anywhere on the way to and from school and at the roadside and street corners, so that the city can meet the needs of childrens daily games in the city.

Problem 2: the internal boring, low playability

The survey found that the internal accessibility of Shenyang pocket park is seriously insufficient. Of the 36 pocket parks evaluated, 20 have places for children to explore and hide, such as masked structures. There are only 5 places where children can have contact with nature, and 30 places have fitness equipment. However, across the 36 samples, more than half had challenging game facilities such as swings, slides, climbing, balance, and jumping, but not entirely game areas or sand piles for preschoolers. It can be said that the pocket park in Shenyang is lacking in the design of age children. Some small open Spaces can be considered as game venues, but such an untargeted space design is not good for the safety of children. But the good news is that most of the venues for children to exercise and play are basically surrounded by seats for adults to rest. Many of the pocket parks in this evaluation show vivid scenes of parents sitting on benches, chatting and children running around in the open space.

Problem three: single furniture, unfavorable game

The survey found that the Shenyang pocket park furniture facilities are very complete, rest seats, trash cans, lighting, signs and so on each place are very abundant. But the disadvantage is that there are few furniture for children, such as childrens scale (smaller size) rest seats, multi-functional (such

as chess board) tables, etc., which will make the park less attractive to children and parents with children.

### 3.2. Advantages

Advantage 1: good accessibility, changeable terrain

According to the evaluation, it was found that most of the 36 selected pocket parks were built near the subway station, at the gate of the intersection / community, and very few were on the street corners. At the street corner, it is adjacent to two vertical streets, and inside the park can be insecure and lead to childrens inattention. For example, in the survey of the street corner of Zhengliang Community Hospital in Shenbei New District, there was a small open space with simple seats and green space transformed into a pocket park. The park is adjacent to two main urban roads, with both primary schools and kindergartens nearby, and it still fails to attract children aged 3 to 12 to play here.

Advantage 2: friendly entrance, clear boundary

There is also an important functional element of the —— sign entrance. The survey found that all the pocket parks in Shenyang have signs at the entrance. But the disadvantage is that all the entrances are adopted in a unified signboard form. The theme and culture of a park are the important factors to attract children into it. The spread of this culture has formed a kind of profound urban atmosphere with extensive and profound Chinese culture. Children growing up in such an urban atmosphere can not only increase childrens cultural knowledge through teaching and entertainment, but also strengthen the dissemination and inheritance of culture.

Advantage three: sufficient greening, not easy to allergy

The greening rate of pocket parks in Shenyang can reach 40% on average, and some even reach 50%, which is very beneficial to the health of children aged 3 to 12. Greening can purify the air, is conducive to lung health, relieve fatigue, but also has a positive impact on mental health. Plants have found that most of the flowers and trees planted in the park are non-toxic and do not cause respiratory diseases such as pollen allergy. Disadvantages in greening is no trees for children to climb, all the trees and the lawn with raised edge, which reduces the childrens actual contact with nature, children only with visual contact with nature is not enough, to fully mobilize the childs view, listen, smell, smell, taste, touch, to feel, cognition, understand the mystery of nature.

## 4. Comparison of Excellent Cases At Home and Abroad

When discussing the design strategies for Shenyang's pocket parks from a child-friendly and health perspective, we can draw on successful cases both domestically and internationally. For instance, New York's High Line transformed an abandoned railway into an aerial garden, not only enhancing the city's green space but also providing a platform for children to connect with nature. Studies have shown that activities in natural environments can significantly improve children's physical and mental health. In China, Shanghai's Xujiahui Park has successfully turned into a vibrant community center by creating multi-functional children's activity areas, promoting social interaction and physical development among children. These examples demonstrate that considering children's needs in design can effectively enhance the value of parks and the happiness of communities. Therefore, in the design of Shenyang's pocket parks, it is important to focus on how to create multi-functional activity spaces and incorporate natural elements to meet the health and growth needs of children.

## 5. Child Friendly Pocket Park Promotion Strategy

### 5.1. One is to Ensure That the Pocket Park is Accessible

In order to attract parents and children into the park, the facilities and environment inside the park should be visible from the outside of the park and enable parents to easily observe the childrens activities. In addition, the entrance logo should have cultural characteristics, avoid uniformity, and do a good job in cultural transmission and inheritance.

### **5.2. Second, Increase the Natural Interaction Space**

At present, there is a lack of places for children to interact with nature. It is suggested to set up open green space for picnic, camping and natural exploration, and introduce interesting natural facilities such as tree house, tunnel and plant mazes to improve the interest and playability of natural space.

### **5.3. The Third is to Improve the Barrier-Free Design**

Children have a short stride length, so the conventional step size may be too large for children to make safely. Therefore, adding child-friendly barrier-free facilities and equipment, such as children's special handrails, children's size steps, soft ground, etc., can improve the safety and convenience of children in the park.

### **5.4. The Fourth is to Create the Hidden Space in the Pocket Park**

In addition to natural space, hidden space suitable for hide and seek can be created artificially while on the premise of ensuring safety, and it can serve as a "mysterious zone" for children to explore with partners, thus improving the attractiveness of pocket parks to children.

### **5.5. Fifth, Increase the Playability of Entertainment Facilities**

Pocket parks should meet the needs of children's daily play, so the space design should be as detailed as possible. Such as hiding space, climbing trees, varied terrain, bunker and water, adventure games and so on. In addition, from the overall consideration, the temporary street parking spaces and fragmented green spaces in the block can be reasonably used to place interesting landscape facilities to form temporary game spaces such as "flash park". At the same time, the removable or removable convenient art installation [4], which is compatible with the overall environment of the block.

### **5.6. Sixth, Regularly Check and Maintain the Safety Status of the Park Equipment**

Park managers should regularly inspect and maintain park equipment to ensure that it is free from aging, damage, or other safety issues. Timely repair or replacement of unsafe equipment can avoid accidents and ensure the safety of children and parents.

When exploring the design strategies for Shenyang's pocket parks from a child-friendly health perspective, we find that creating multi-functional activity spaces is key to enhancing the parks' appeal and usage efficiency. According to the guidelines in the "Child-Friendly City Planning Manual," multi-functional spaces can meet the activity needs of children of different ages, promoting their physical and mental development. For instance, by setting up sandpits, climbing frames, and slides, children can be encouraged to engage in outdoor activities, which strengthens their physical health. Moreover, incorporating natural elements and ecological education, such as creating rain gardens and insect hotels, not only beautifies the environment but also educates children about nature and ecology, fostering their environmental awareness. In the case analysis of Shenyang, we've noticed that some pocket parks lack innovation and diversity in design, resulting in low space utilization. Therefore, design strategies should focus on creating safe and educationally meaningful multi-functional spaces to meet children's health needs while enhancing the parks' utility value and the quality of the urban environment.

## **6. Summary**

When discussing the future outlook of Shenyang Pocket Park design, we should not only pay attention to the innovative design of child-friendly public space, but also consider how to integrate the health perspective into it to promote the all-round development of children. According to the guidelines in the Child Friendly City Planning Manual, child-friendly pocket parks should be a safe place for children to explore nature, play games and have social interactions. At the same time, multi-functional activity areas, such as outdoor classrooms, reading corners and art creation areas, are

established to promote childrens physical and mental health. In addition, community participation and integration of educational functions is also key to future development, by organizing regular community activities and environmental education programs, while developing childrens environmental awareness and responsibility.

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