

# A study on the Renovation of Public Space in Old Districts from the Perspective of Child-friendly Cities

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**Abstract:** *With the accelerated development of urbanization, the transformation of public spaces in old districts has become an important task to improve the quality of cities and the quality of life of residents. Taking a child-friendly city perspective as a starting point, this paper explores how to create a more parent-child friendly and child-friendly urban environment by transforming public spaces in old districts. Through research and case studies, this study proposes specific strategies and measures for the renovation of public spaces in old districts, with a view to providing useful references and lessons for urban planning and management.*

**Keywords:** *Child-friendly city, Public space in the old district, Renovation*

## 1. Introduction

As global urbanization continues to advance, the quality and function of urban public spaces have a significant impact on residents' quality of life and well-being. In urban public space transformation, children, as an important group, have received increasing attention to their needs and rights. The introduction of a child-friendly city perspective aims to focus on children's growth and developmental needs from their perspective, creating a city environment suitable for their growth. As an integral part of the city, the public spaces in old neighborhoods bear many historical and cultural memories, but they also face issues such as aging, deterioration, and congestion. Therefore, it is crucial to transform the public spaces in old neighborhoods from a child-friendly city perspective, which becomes an important topic in improving urban quality and residents' quality of life. This study aims to explore the issues of transforming public spaces in old neighborhoods from a child-friendly city perspective and propose corresponding strategies and measures, aiming to provide useful references and insights for urban planning and management departments.

## 2. Characteristics and Concepts of Child-Friendly Cities

### 2.1. Definition of Child-Friendly City

Child-friendly city is a concept and practice that aims to provide a safe, healthy, and conducive urban environment for children's growth and development. It places children at the core of urban planning and design, focusing on their rights and needs and creating spaces for their living, learning, and playing. The definition of a child-friendly city includes the following aspects: (1) Safety and accessibility: A child-friendly city ensures that children's activities and mobility in the urban environment are safe. It provides child-friendly transportation facilities, sidewalks, and traffic planning to reduce the risk of accidents. (2) Health and environmental sustainability: A child-friendly city promotes good air quality, water quality, and environmental hygiene. It provides sufficient green spaces and recreational areas, encourages outdoor activities and physical exercise, and promotes children's physical health [1]. (3) Participation and the right to participate: A child-friendly city respects children's opinions and their right to participate. It encourages their involvement in urban planning and decision-making processes, allowing them to express their views and needs. (4) Education and culture: A child-friendly city provides high-quality educational resources and cultural activities. It establishes children's libraries, museums, art centers, etc., enabling children to access diverse learning and cultural experiences. (5) Community participation and sharing: A child-friendly city encourages mutual assistance and cooperation among community residents, creating a friendly community atmosphere where children can interact and communicate safely and freely with neighbors, friends, and family

members. In conclusion, a child-friendly city pursues child-centered sustainable development, emphasizing the fulfillment of children's rights and needs, and creating a urban environment suitable for children's growth and development.

## **2.2. Characteristics of a child-friendly city**

A child-friendly city has the following characteristics: (1) Safety: A child-friendly city prioritizes the safety of children by providing safe transportation environments and facilities. This includes designating child-safe zones, implementing safe sidewalks and pedestrian crossings, and ensuring safe travel for children. (2) Accessibility: A child-friendly city ensures that children can conveniently access schools, parks, cultural facilities, and other activity venues. It provides convenient public transportation options and promotes walking, cycling, and other modes of transportation. (3) Green and natural environment: A child-friendly city offers abundant green spaces and natural environments, including parks, gardens, and green belts. It allows children the opportunity to interact with nature, promoting their physical and mental well-being. (4) Play and sports facilities: A child-friendly city provides a diverse range of play facilities and sports venues for children, including playgrounds, slides, swings, and running tracks. This allows children to engage in fun games and physical activities. (5) Education and cultural resources: A child-friendly city offers high-quality educational resources and cultural facilities, including schools, libraries, museums, art centers, and more. This allows children to access diverse learning and cultural experiences. (6) Community participation and interaction: A child-friendly city encourages community residents to participate and interact, promoting the establishment and development of neighbor relationships and providing a supportive community environment for children. In summary, creating a city environment that is suitable for children's growth and development is crucial. A child-friendly city has the characteristics of safety, accessibility, green and natural environment, play and sports facilities, education and cultural resources, and community participation and interaction [2].

## **3. Problems and Challenges of Public Space in Old Districts**

### **3.1. The current situation and dilemma of public space in old districts**

The current situation and challenges of public spaces in old districts mainly include urban aging and outdated facilities, population decline and social disconnection, single functionality and lack of diversity, limited mobility and poor accessibility, environmental pollution and noise issues, etc. Firstly, public spaces in old districts are often the oldest areas in cities, and their facilities and buildings are often aging and dilapidated. These areas have experienced the test of time, and many streets, squares, parks, and buildings suffer from damage, corrosion, and lack of maintenance. This not only affects the overall image of public spaces but also brings about a sense of insecurity for residents and visitors. Secondly, old districts often face the problems of population decline and social disconnection. With the development and renewal of cities, residents gradually move away from old districts, resulting in a decrease in population and a weakening of social vitality. This leads to a certain degree of population aging and social fragility in these areas. Such situations often result in a lack of vibrancy and community interaction in public spaces in old districts, creating an atmosphere of isolation and desolation [3]. Moreover, public spaces in old districts also suffer from the problem of single functionality and lack of diversity. Many public spaces in old districts are limited to a single purpose, such as having only a large flower bed or seating area, lacking diverse activity places. This restricts the use of public spaces to specific groups of people or specific times, failing to meet the needs of residents and visitors of different ages, interests, and demands. Additionally, limited mobility and poor accessibility are also issues in old district public spaces. Many old districts were built without considering accessibility design and passage, resulting in narrow streets, uneven sidewalks, and a lack of facilities such as wheelchair ramps and guardrails, which make it difficult for the elderly, disabled individuals, and users of strollers or baby carriages to get around. Lastly, public spaces in old districts also face environmental pollution and noise issues. Due to the concentration of traditional industries, commercial activities, and transportation in old districts, air and water quality are affected, and noise pollution is widespread. This not only affects residents' physical health but also weakens the function of public spaces as leisure and recreational areas. In conclusion, public spaces in old districts face a series of challenges including outdated facilities, population decline, single functionality, limited mobility, environmental pollution, and noise issues in the process of urban development and renewal. To address these problems, city planners and designers need to focus on the reconstruction and renovation of old

districts, making them people-centered, multifunctional, livable, and sustainable urban public spaces.

### ***3.2. The necessity and urgency of public space renovation in old districts***

The renovation of public spaces in old districts is urgent and necessary for the following reasons: Firstly, the renovation of public spaces in old districts can enhance the city's image and attractiveness. As cities develop, old districts often appear outdated and unappealing. By revitalizing old buildings and facilities, improving the overall appearance and functionality of public spaces, a new look can be brought to the city. This not only attracts more visitors but also enhances the city's international competitiveness, promoting tourism and economic development. Secondly, the renovation of public spaces in old districts can improve residents' quality of life. Many old district public spaces suffer from problems such as age, congestion, and lack of safety, which cause inconvenience and troubles in residents' lives. By renovating these spaces, providing better transportation, leisure, entertainment, and cultural facilities, the living experience and quality of life of residents can be enhanced. Thirdly, the renovation of public spaces in old districts is an important means of protecting urban history and cultural heritage. Many old districts possess a rich history and abundant cultural resources, but due to a lack of effective protection and utilization, these heritage sites may gradually disappear or be damaged [4]. By renovating public spaces in old districts, these valuable historical and cultural assets can be preserved and passed down, allowing the city's past and present to blend together, and showcasing its unique charm. Additionally, the renovation of public spaces in old districts is also an important measure for promoting sustainable development. Many old districts face issues such as environmental pollution, resource waste, and traffic congestion. By renovating public spaces and introducing sustainable architectural designs, green transportation systems, and energy-efficient facilities, energy consumption and carbon emissions can be reduced, resource utilization efficiency can be improved, and a more environmentally friendly and sustainable urban environment can be created. Lastly, the renovation of public spaces in old districts can promote community development and cohesion. Old districts often face community decline and population loss, with limited social interactions among residents. By injecting new vitality and community facilities through the renovation of public spaces, residents' participation and sense of belonging can be stimulated, promoting community development and cohesion, and creating a more harmonious and livable community environment. In conclusion, the renovation of public spaces in old districts is urgent and necessary as it can enhance the city's image and attractiveness, improve residents' quality of life, protect urban history and cultural heritage, promote sustainable development, and foster community development and cohesion. This requires joint efforts from urban planners, governments, and communities to create livable, sustainable, and charming public spaces in old districts through effective planning, design, and investment.

## **4. Strategies for Renovating Public Spaces in Old Districts from the Perspective of Child-friendly Cities**

### ***4.1. Increase children's play facilities and activity areas***

From the perspective of child-friendly cities, the renovation of public spaces in old districts should focus on increasing children's play facilities and activity areas to provide a safe, fun, and stimulating environment that meets the needs and rights of children. The following are some strategies and recommendations: (1) Adding diversified children's play facilities: Communities can add diversified children's play facilities such as slides, swings, climbing frames, trampolines, etc. in public spaces in old districts, so that the needs of children of different ages can be met. These facilities should meet safety standards and ensure easy maintenance and cleaning. (2) Establishing children's activity areas: Communities can create safe and comfortable outdoor and indoor activity areas for children in parks, plazas, community centers and other places. These areas can provide a variety of games and entertainment facilities, including outdoor sports fields, football fields, basketball courts, mazes, as well as indoor libraries, theaters, art studios, etc., to offer children opportunities for free play and learning. (3) Providing a barrier-free and safe environment can Ensure that children's playgrounds and activity areas provide accessibility and convenience for children with different abilities and special needs, such as wheelchair ramps, guardrails, safety measures, etc. At the same time, it is necessary to enhance safety measures so that children's safety in playgrounds and activity areas can be ensured, such as preventing sharp and dangerous objects, installing surveillance and security systems, etc. (4) We should also focus on environmental quality and green space: When renovating public spaces in old neighborhoods, attention should be paid to creating a high environmental quality and green spaces.

Increase vegetation, flower beds, gardens, and lawns to provide fresh air and comfortable leisure environments, allowing children to connect with nature and promote their physical and mental well-being. (5) We should incorporate interactive and educational elements: Stakeholders can introduce interactive and educational elements such as science exhibits, discovery zones and art walls in children's playgrounds and activity areas. This encourages children's spirit of exploration, creativity, and learning, while stimulating their interest in science, art, and culture. The implementation of these strategies requires collaboration among the government, city planners, designers, and community residents. Together, efforts can be made to create child-friendly public spaces in old neighborhoods, providing children with safe, fun, and enriching environments for play and growth.

#### ***4.2. Provide safe and comfortable transportation environment and transportation facilities***

In the renovation of public spaces in old neighborhoods, providing a safe and comfortable transportation environment and facilities is crucial for creating child-friendly cities. Here are some strategies and suggestions: (1) Safe road design: When renovating old neighborhood roads, prioritize the safety of children. Relevant persons should design spacious sidewalks to ensure that children and pedestrians have sufficient walking space, and install clearly marked crosswalks and pedestrian facilities. It is also necessary to install traffic signs, signals and speed limit signs to maintain traffic order and ensure the safe passage of children. (2) Non-motorized transport facilities: We should provide suitable conditions for cycling, walking and skateboarding. In addition, it is necessary to provide safety guardrails on roads to separate pedestrians and bicycles. Relevant staff should also provide parking and storage facilities for bicycles so that it is convenient for walking and bicycling. (3) Provision of safe crossing facilities is necessary: Crossing facilities that meet the needs of children should be provided at intersections and densely populated areas. For example, pedestrian traffic lights, crosswalks, footbridges or underpasses are provided so as to ensure that children can cross the streets safely. Regularly inspect and maintain these facilities to ensure their proper functioning and safety. (4) Safe and convenient public transportation: Improve the public transportation network in old neighborhoods to make children's travel more convenient and safe. Those responsible should increase the number of bus stops, subway stations and railroad stations and provide comfortable shelters, seats and route signs, which will create a comfortable travel environment. In addition, it is necessary to provide specialized transportation services for children with special needs, such as wheelchair accessibility and assistance for children with disabilities. (5) Safe school bus system: Schools should provide children with a safe and reliable school bus system to ensure that they are protected from transportation hazards and inconvenience on their way to and from school. Arranging for an appropriate number of school buses can provide convenient transportation for students. It is also necessary to equip school buses with professional drivers and necessary safety features such as seat belt systems and emergency exit doors. (6) Education and publicity campaigns. Schools are required to conduct traffic safety publicity and education campaigns to educate children and parents on traffic safety knowledge and skills. Relevant personnel should organize safety lectures, games, competitions and other activities, which can raise children's awareness of traffic rules and dangers as well as teach them proper traffic behaviors and skills [5]. In addition, we can strengthen traffic safety campaigns through community radio, bulletin boards, and social media to raise public awareness and encourage the public to take action. When renovating public spaces in old neighborhoods, it is important to consider various factors comprehensively, including traffic planning, transportation facility construction, traffic safety education, and awareness. The government, city planners, education departments, and community residents should actively participate and collaborate to provide a safe and comfortable transportation environment and facilities, creating a child-friendly travel environment.

#### ***4.3. Create a natural and green leisure space***

Creating natural and green recreational spaces has multiple benefits in child-friendly cities. Firstly, these spaces provide an opportunity for children to interact with nature and experience its beauty and wonder. This not only promotes their physical and mental well-being but also stimulates their curiosity and desire for exploration. Natural and green environments offer a peaceful place for children to relax, away from the hustle and pollution of the city, allowing them to unwind, reduce stress, and fatigue. Secondly, creating natural and green recreational spaces encourages children to engage in outdoor activities and sports. These spaces can provide open grassy fields, sports facilities, and trails for children to run, jump, play soccer, ride bicycles, and more. These outdoor activities contribute to children's physical health and development, while also fostering teamwork, communication skills, and confidence. Additionally, natural and green recreational spaces provide opportunities for children to

interact with their families, friends, and other members of the community. These spaces create social and interactive places, such as parks, playgrounds, and leisure areas, where children can connect with others and build relationships and friendships. They can play together, explore nature, exchange ideas, and create memories. To create natural and green recreational spaces, the following strategies can be considered: (1) Urban greening: Increase green spaces such as parks, gardens, and green belts, making the city more ecologically friendly and livable. Planting trees, flowers, and shrubs provides opportunities for children to connect with nature. (2) Communities can establish nature reserves: designating nature reserves in old communities to protect the existing ecosystems and rare species of flora and fauna will provide children with opportunities to visit and learn about them, and foster their awareness of environmental protection. (3) Building parks and playgrounds: In the process of planning and renovation of old communities, the relevant personnel should build parks and playgrounds, so as to provide children with spacious outdoor space for games, sports and recreational activities. (4) Educational and inspirational activities should also be carried out in the community: Outdoor seminars, environmental lectures and nature exploration activities should be organized in natural and green recreational spaces to encourage children to interact with, learn from and discover nature. (5) Staff should design eco-friendly landscapes: Consider the use of sustainable materials and resources when designing leisure spaces, and adopt natural drainage systems and energy-saving devices to reduce resource consumption and pollution. In conclusion, creating natural and green recreational spaces provides opportunities for children to interact with nature, engage in outdoor activities, and socialize with others.

#### ***4.4. Introduction of diversified cultural activities such as art and culture***

Introducing diverse cultural activities such as arts and culture requires a series of measures to ensure successful implementation. Firstly, cultural centers or art spaces can be established. These places can serve as hubs for children and community residents to engage in various artistic and cultural activities. Cultural centers can provide facilities such as studios, exhibition areas, and performance venues, offering artists and cultural practitioners a place for creation and performance. Such spaces can host a variety of art exhibitions, concerts, performances, and workshops to attract the participation of children and community members. Secondly, organizing regular cultural events and festive celebrations is also an important measure. Various activities can be planned, such as music festivals, dance performances, theater shows, and painting competitions, to provide children with opportunities to showcase their talents and engage in the arts. Additionally, festive events based on local cultural traditions and characteristics can help children understand and respect their cultural heritage. Creating collaborative opportunities is another important measure for introducing diverse cultural activities. Collaborations can be formed with local arts groups, schools, and communities to jointly organize art workshops, music performances, dance shows, and other projects. Through collaboration, various resources and expertise can be integrated to provide more diverse cultural experiences and learning opportunities. Furthermore, encouraging the participation of young artists and cultural practitioners is crucial. Opportunities for young artists to showcase and perform can be provided, such as organizing special exhibitions, concerts, and theater festivals for them. By supporting the development of young artists, more innovative and diverse artistic creations can be inspired. In addition, strengthening cooperation with schools and educational institutions is essential. Integrating arts and cultural activities into school curricula and collaborating with educational institutions to organize art training programs can provide children with more opportunities to engage with arts and culture, fostering their artistic literacy and appreciation. Lastly, community residents and families should be encouraged to participate. By organizing community activities and family cultural days, families and community members are encouraged to participate in artistic and cultural activities together. Such involvement can strengthen neighborhood relationships, enhance community cohesion, and provide children with a platform to share and communicate with others. To sum up, introducing diverse cultural activities such as arts and culture requires a series of measures including establishing cultural centers, organizing regular events, creating collaborative opportunities, supporting young artists, strengthening cooperation with schools, and encouraging community and family participation. This can provide children with diverse cultural experiences and learning opportunities, enrich their lives, and cultivate their artistic appreciation and creativity. Moreover, these measures can promote community development and the preservation of cultural diversity.

#### ***4.5. Community engagement and management***

Community participation and management are key factors in achieving successful transformation of

public spaces in old neighborhoods. In the community-oriented transformation process, the involvement and management of community residents play an important role. Here are some suggestions to promote community participation and effective management: (1) Establish collaborative partnerships: Build partnerships with relevant stakeholders such as community residents, community organizations, non-profit organizations, government agencies, and private sectors. This allows for collective brainstorming and the development and implementation of public space transformation plans. (2) Stimulating residents' interest in participation: The community can organize community meetings, discussions and workshops to invite residents to participate in the planning, design and decision-making process of the project. This can provide transparency of information and extensive opportunities for participation, ensure that residents are aware of the objectives and visions of the renovation plan, and encourage them to provide feedback and suggestions. (3) It is also necessary to introduce community representatives. Appoint or elect community representatives to act as advisors or decision-makers for the project and to represent the interests of residents in project management and supervision. Community representatives can help convey the voices and concerns of residents and ensure that the renovation project is consistent with the needs and values of the community. In summary, community participation and management are crucial in achieving successful transformation of public spaces in old neighborhoods. By fostering collaborative partnerships, igniting residents' interest in participation, introducing community representatives, providing training and resource support, establishing monitoring and feedback mechanisms, and respecting cultural diversity, community residents' involvement and effective management can be promoted, leading to sustainable development of public spaces and the prosperity of the community.

## 5. Conclusion

From the perspective of child-friendly cities, research on the transformation of public spaces in old neighborhoods is crucial. By creating natural and green recreational spaces and introducing diverse arts and cultural activities, we can provide children with a safe, healthy, and enjoyable environment for their growth. Such transformation not only meets children's physical and psychological needs but also promotes their learning, development, and social interactions. Children can connect with nature, engage in outdoor activities, and develop teamwork and creativity in natural and green environments. Furthermore, introducing diverse arts and cultural activities enriches their cultural experiences and stimulates their imagination and creativity. Through research on the transformation of public spaces in old neighborhoods, we can create a more ecologically friendly, diverse, and inclusive city for children, enabling them to grow up in a healthy manner while contributing to the development and prosperity of the entire community. Therefore, we should continuously explore and promote the transformation of public spaces in old neighborhoods, with the well-being of children as the starting point, in order to create a better future.

## References

- [1] Alipour A T, Mostafa S M, Taqipour A A. *Exploring the dilapidated neighborhood improvement using child-friendly city principles in Tehran, Iran*[J]. *Proceedings of the Institution of Civil Engineers - Urban Design and Planning*, 2023: 22-29.
- [2] Juwono V, Damara C B. *Performance Analysis of Depok City Health Office in Supporting Child-Friendly City*[J]. *Jurnal Bina Praja*, 2020(1): 12.
- [3] A R P, F E R, S I, et al. *The factors influencing the modal choice for home-to-school trips based on neighborhood unit typology towards Surakarta as a child-friendly city*[J]. *IOP Conference Series: Earth and Environmental Science*, 2020: 447.
- [4] Huang X, Wang YN, Li RQ, et al. *Research on the design of children's public space based on NCD in traditional urban neighborhoods: an example of the entrance space of Dongmao Street Primary School*[J]. *Small Town Construction*, 2023, 41(05): 42-51.
- [5] Ho J C, Yeon A K. *Analysis of Child-Friendly Environment in a Neighborhood Park in Child-Friendly City - Focused on the Moraetmal Neighborhood Park of Seongbuk-gu* -[J]. *Journal of the Korean Institute of Landscape Architecture*, 2019(6): 47.