

Child-Friendly Streetscape in Migrant Workers' Communities in China

Subjects: **Public, Environmental & Occupational Health**

Contributor: Qianxi Zhang , Xinkai Wang , Yat Ming Loo , Wu Deng , Weixuan Chen , Mindong Ni , Ling Cheng

Designing child-friendly streetscapes is a pragmatic and effective approach to addressing the limited outdoor play spaces and social exclusion experienced by migrant children living in vulnerable residential areas. Addressing the development and well-being of all children in urban communities is important for the sustainable development of cities and society. A growing body of research emphasizes the need for urban planning strategies and community initiatives that promote safe and accessible play spaces for children, as well as social integration policies and support networks, thereby fostering children's overall well-being.

child-friendly streetscape

migrant workers

China

1. Introduction

Urbanization has led to an increasing number of children residing in urban areas. A significant subset of this population is migrant children, who are influenced by immigration ^[1]. The urban social–ecological environment presents various challenges to the well-being and development of children living in cities, including traffic hazards, social safety concerns, academic competition, and excessive engagement in digital gaming, all of which result in a substantial reduction in their outdoor play time and space ^[2]. Moreover, migrant children who have migrated from developing areas to developed cities face the additional risk of social and cultural exclusion ^[3]. Addressing the development and well-being of all children in urban communities is important for the sustainable development of cities and society ^[4]. A growing body of research emphasizes the need for urban planning strategies and community initiatives that promote safe and accessible play spaces for children, as well as social integration policies and support networks, thereby fostering children's overall well-being.

To promote children's sustainable development in urban areas, the United Nations Children's Fund (UNICEF) launched the Child-Friendly Cities Initiative (CFCI) in 1996, aiming to create safer, healthier, and more inclusive urban environments for children through urban planning and environmental design ^[5]. Among the various types of urban public spaces, community streets are the basic units of children's daily activities and are essential components of child-friendly urban spatial networks ^[6]. Streets provide pedestrian networks, areas for play and social interaction, and opportunities for children to explore their surroundings and develop life skills ^[7]. Burton and Mitchell's (2006) work highlights that children allocate significantly more time to streets (eight to ten times more) than to playgrounds, emphasizing the importance of prioritizing the design of streets as inclusive, playable spaces ^[8]. Especially in communities facing social segregation with limited public spaces, streets serve as vital informal activity spaces and community hubs, contributing to positive social relationships among children and adults ^[9].

Migrant workers' communities in China face similar challenges and exhibit regional characteristics. Rapid urbanization has led to nationwide internal migration, with a large number of migrant workers seeking employment opportunities by moving from underdeveloped regions to developed cities along the southeast coast of China ^[10]. The “What the 2020 Census Can Tell Us About Children in China: Facts and Figures” report released by the National Bureau of Statistics of China in 2023 reveals that the total number of migrant children is 71.09 million, accounting for 23.88% of the total child population of 297.66 million ^[11]. This means that, in China, one out of every five children is a migrant child. The majority of these migrant children, along with their parents, commonly reside in older neighborhoods or urban villages with lower rents, forming a significant number of migrant workers' communities. Most of these communities experience issues such as poor environmental quality, inadequate public spaces, and social exclusion ^{[12][13]}. Recognizing the importance of children's sustainable development in cities, China government makes child-friendly city construction one of the key priorities in the “14th Five-Year Plan (2021–2025)” ^[14]. The migrant children and the migrant workers' communities they live in have started receiving attention and policy support from the government. However, welfare funding specifically for child-friendly spatial improvements remains limited ^[15]. In this context, prioritizing small-scale streetscape improvements emerges as a pragmatic and economically viable strategy for addressing the challenges of insufficient outdoor play opportunities and social exclusion faced by migrant children ^[16].

Research on child-friendly urbanism related to streetscapes has had a positive impact on urban planning and environmental design practices ^[17]. However, the current child-friendly planning and design guidelines issued by global authorities and governments often lack specificity in addressing the unique social–ecological contexts of migrant workers' communities in China. These guidelines primarily cater to larger-scale and general street projects ^[18] and do not provide specific discussions on the principles and elements of small-scale streetscape design at the community level. Furthermore, landscape designers involved in practical projects often lack formal training in designing child-friendly streetscapes, and their knowledge of child environmental psychology and spatial sociology may be limited ^[19]. As a result, the current trend in child-friendly streetscape renewal projects in China tends to be homogeneous, standardized, and adult-oriented ^[20], lacking children's perspectives and a full-cycle design process. The consideration given to addressing local social issues through child-friendly spatial interventions is also inadequate, particularly regarding the value of children's participation in these interventions as a means of promoting social inclusion. This aspect is often overlooked in many outcome-oriented practices.

2. Child-Friendly Streetscape in Migrant Workers' Communities in China

2.1. Child-Friendly Streetscape Design

Child-friendly streets are safe, playable, comfortable, and inclusive pedestrian walkways, designed to cater to children of all ages and backgrounds ^[5]. Constructing child-friendly streetscapes can bring numerous advantages to local communities. They not only provide children with opportunities to explore their daily surroundings but also foster positive social connections among children and adults, contributing to the development of children's individual and social identities ^[7]. Research that incorporates children's perspectives reveals their strong appreciation for streets as playgrounds ^[17]. Children not only use the constructed environment as a play area but also make use of the nearby informal built environment. They value “hang out” spaces like community streets. As Colin Ward (1978) stated in his

book *The Child in the City*: “Children should be able to play anywhere, easily, informally, and not be forced into a ‘playground’” [21]. Street play is important in the holistic development of children, encompassing physical, cognitive, social, and emotional aspects [22]. According to a theoretical framework developed by Jacobs, social networks can develop when a street’s layout and facilities encourage engagement and walking [23]. These studies provide compelling evidence supporting the social and ecological benefits of creating child-friendly streetscapes. Designers should reclaim the streets as vital spaces for community livability and playability, particularly for children [24].

Local governments all over the world have launched policies or community planning to facilitate this shift to make the streets in neighborhoods more friendly for children. Delft in the Netherlands introduced the Woonerfs program, transforming residential streets into pedestrian-oriented and creative yards [25]. In the UK, the Home Zone Program integrates formal and informal spaces to facilitate children’s social and play activities [26]. Scholars are also active in the study of child-friendly street design principles. According to Lynch, a child-responsive street should help children’s comprehension of fundamental concepts like size, shape, and number, learning to create a body of knowledge by connecting knowledge to experience [27]. This concept is fully developed in the area of playful learning landscape design [28]. Jan Gehl’s Twelve Quality Criteria serve as a guideline for street design, emphasizing walkability, active street frontages, and suitable street furniture that aligns with daily activities [29]. Regarding planning and design guidelines for child-friendly spaces, global authorities have released valuable resources. UNICEF has published handbooks on child-responsive urban planning and child-friendly communities, emphasizing the creation of comfortable and stimulating physical spaces for children to play, socialize, and relax with their families [30]. The Global Designing Cities Initiative (GDCI) has collaborated with experts from various cities worldwide to develop the guide “Designing Streets for Kids”. This guide focuses on addressing the specific needs of children and their caregivers as pedestrians, cyclists, and transit users in urban streets globally [31]. It offers tools, strategies, street design examples, and case studies that can be customized to local circumstances.

The literature above affirms that child-friendly streetscapes offer substantial social–ecological benefits as prototypes of unstructured play spaces, positively impacting children’s physical health, cognitive development, and social interactions. Insights from scholars in environmental design and early childhood development, along with national practices from diverse countries and guidelines from global professional organizations, have established fundamental principles and frameworks for designing child-friendly streetscapes.

2.2. Streetscape Regeneration in Migrant Workers’ Communities in China

In China, migrant workers’ communities have emerged as a distinct type of community due to internal migration [32]. Rapid urbanization in China has caused a substantial influx of people from rural or underdeveloped areas to urban centers, seeking better employment opportunities [10]. This has resulted in a migrant population of nearly 380 million. Among this population, approximately 71.09 million are migrant children; 66.93 million of them are living in urban areas, accounting for around 22% of the total child population in China [11]. The majority of the migrant population resides in older neighborhoods or urban villages characterized by lower rental costs, forming numerous migrant workers’ communities. These migrant children encounter issues such as unfavorable living environments, inadequate social integration, and limited access to education. The communities they live in commonly have poor living conditions and limited infrastructure, impacting the residents’ health and environmental satisfaction [32]. In addition to the challenges

posed by their parents' inconsistent employment, migrant children still face barriers from the Hukou system when it comes to accessing education, healthcare, and housing [13]. These difficulties ultimately result in social exclusion and disparities in opportunities for migrant children [12]. To address these challenges, the Chinese government has implemented certain policies and measures. For instance, child-friendly city construction was included in the national "14th Five-Year Plan (2021–2025)". The living and educational environments of migrant children have attracted attention, emphasizing the significance of addressing their spatial rights and social integration within migrant workers' communities [33]. Addressing this emerging research issue holds significant implications for improving the well-being and social inclusion of migrant children in China's urban habitats.

The migrant workers' communities in China exhibit complex spatial and social characteristics. These communities often coexist with older residential areas or high-density urban villages that lack adequate public spaces and suffer from poor environmental quality [34]. Consequently, the migrant children residing in these communities face a lack of dedicated playgrounds or parks, relying primarily on streets and small pocket spaces for outdoor activities [35]. Socially, migrant workers' communities consist of diverse individuals from various regions, leading to limited social connections and support networks, which may result in social and cultural exclusion [36]. These social–ecological constraints significantly impede children's adaptation to city life, limiting their access to outdoor activities and social integration [13]. Although the eligible migrant workers' communities have access to apply for certain financial support for child-responsive environmental improvement [37], budgetary constraints lead to a kind of micro-scale regeneration, which is one of the most viable and economical design strategies [16]. Small-size streets are often selected as the key areas for regeneration because they play a crucial role in the loosely knit social structures of children [38] and serve as important spaces for their physical activities and informal education [39]. Therefore, employing a design-led approach to maximizing the ecological and social value of streets is crucial to addressing the insufficient outdoor play facilities and the social exclusion faced by migrant children in migrant workers' communities [9].

In recent years, Chinese scholars have conducted research on child-friendly community streets and migrant children. Wu expanded the concept of "friendliness" to encompass the dynamic notion of "friendship" from a spatial perspective [40]. Some studies have focused on the behavioral differences between children and adults on the streets. The CEB analysis framework was developed to promote safety, health, care, and vitality in child-friendly streets [41]. Shen proposed the "co-ware" design strategy, integrating spatial and social structures in the street environment to create a child-friendly community where these structures coexist [6]. Cognitive mapping was utilized to study migrant children's perceptions of the urban village environment in Guangzhou [42]. The catalytic value of children's outdoor play spaces in improving the overall environment of old communities was emphasized [34]. While these studies offer diverse perspectives on improving the social and spatial environments of child-friendly communities, they lack specific design criteria and procedural frameworks for child-responsive streetscapes and addressing social issues in migrant workers' communities.

References

1. UNICEF. The State of the World's Children 2019. Available online: <https://www.unicef.org/reports/state-of-worlds-children-2019> (accessed on 30 June 2023).

2. Loebach, J.; Sanches, M.; Jaffe, J.; Elton-Marshall, T. Paving the Way for Outdoor Play: Examining Socio-Environmental Barriers to Community-Based Outdoor Play. *Int. J. Environ. Res. Public Health* 2021, 18, 3617.
3. Hu, B.; Wu, W. Parental Support in Education and Social Integration of Migrant Children in Urban Public Schools in China. *Cities* 2020, 106, 102870.
4. Andal, A.G. Children and Urban Vitalism amidst Transitions: Perspectives from Slum-Dwelling Children in the Philippines. *Cities* 2023, 135, 104221.
5. UNICEF. *Child Friendly Cities and Communities Handbook*; UNICEF: Geneva, Switzerland, 2018.
6. Shen, Y.; Yun, H.; Zhao, M.; Liu, M. Child Friendly Community Street Environment Construction Strategy. *Arch. J.* 2020, S2, 158–163. (In Chinese)
7. Gleave, J. *Community Play: A Literature Review*; Play England: London, UK, 2020.
8. Burton, E.; Mitchell, L. *Inclusive Urban Design: Streets For Life*; Routledge: London, UK, 2006; ISBN 978-0-08-045645-4.
9. Cochran, M.M.; Brassard, J.A. Child Development and Personal Social Networks. *Child Dev.* 1979, 50, 601–616.
10. Chan, K.W. China: Internal migration. In *The Encyclopedia of Global Human Migration*; John Wiley & Sons, Inc.: Hoboken, NJ, USA, 2013.
11. What the 2020 Census Can Tell Us about Children in China Facts and Figures. Available online: <https://www.unicef.cn/en/reports/population-status-children-china-2020-census> (accessed on 30 March 2023).
12. Xu, Q.; Palmer, N.A. Migrant Workers' Community in China: Relationships among Social Networks, Life Satisfaction and Political Participation. *Psychosoc. Interv.* 2011, 20, 281–294.
13. Wang, X.; Elkhoully, A.A.; Shukla, P.; Jiang, W.; Zhang, X.; Zhang, Q.; Wu, S.; Ni, M.; Fan, S.; Günay, Z.; et al. The Child-Friendly Cities Concept in China: A Prototype Case Study of a Migrant Workers' Community. *Int. Soc. Work* 2023, 00208728221143648.
14. China to Promote National Health during 14th Five-Year Plan. Available online: http://english.www.gov.cn/policies/latestreleases/202205/20/content_WS62874295c6d02e533532b0bd.html (accessed on 30 March 2023).
15. Zhang, J. Neighborhood conflict and their resolution caused by residential public space:taking 83 communities of Shanghai for example. *Urban Probl.* 2018, 3, 76–81. (In Chinese)
16. Chai, P.; Tong, Y. Practices and Reflections of Micro Regeneration of the Street Environment in the Urban Regeneration Context. *Archit. J.* 2022, 3, 37–43. (In Chinese)
17. Paul, T.; Doyle, J. Reclaiming the Residential Street as Play Space. *Int. Play J.* 1996, 4, 91–97.

18. Global Designing Cities Initiative; National Association of City Transportation Officials. *Global Street Design Guide*; Island Press: Washington, DC, USA, 2016; ISBN 978-1-61091-701-8.
19. Shackell, A.; Butler, N.; Doyle, P.; Ball, D. *Design for Play: A Guide to Creating Successful Play Spaces*; The Department for Children, Schools and Families (DCSF) and the Department for Culture, Media and Sport (DCMS): London, UK, 2008.
20. Shen, Y.; Kinoshita, I.; He, L. Study on the Development Characteristics and Re-Developing Direction of Children's Playing Space in High-Rise Housing Estate. *Hum. Geogr.* 2015, 30, 28–33. (In Chinese)
21. Ward, C. The Child in the City. *Society* 1978, 15, 84–91.
22. Moore, R.; Young, D. Childhood Outdoors: Toward a Social Ecology of the Landscape. In *Children and the Environment; Human Behavior and Environment*; Altman, I., Wohlwill, J.F., Eds.; Springer: Boston, MA, USA, 1978; pp. 83–130. ISBN 978-1-4684-3405-7.
23. Jacobs, J. "The Uses of Sidewalks: Safety": From The Death and Life of Great American Cities (1961). In *The City Reader*; Routledge: London, UK, 2020; ISBN 978-0-429-26173-2.
24. Karsten, L.; van Vliet, W. Children in the City: Reclaiming the Street. *Child. Youth Environ.* 2006, 16, 151–167.
25. Ben-Joseph, E. Changing the Residential Street Scene: Adapting the Shared Street (Woonerf) Concept to the Suburban Environment. *J. Am. Plan. Assoc.* 1995, 61, 504–515.
26. Biddulph, M. Street Design and Street Use: Comparing Traffic Calmed and Home Zone Streets. *J. Urban Des.* 2012, 17, 213–232.
27. Banerjee, T.; Lynch, K. *Growing Up in Cities*, 1st ed.; Lynch, K., Ed.; The MIT Press: Cambridge, MA, USA, 1977; ISBN 978-0-262-12078-4.
28. Hassinger-Das, B.; Bustamante, A.S.; Hirsh-Pasek, K.; Golinkoff, R.M. Learning Landscapes: Playing the Way to Learning and Engagement in Public Spaces. *Educ. Sci.* 2018, 8, 74.
29. Lykken, A.C. *Incomplete Streets: Operationalizing Jan Gehl's 12 Quality Criteria on Ballard Avenue*. Master's Thesis, University of Washington, Washington, DC, USA, 2014.
30. Askew, J. *Shaping Urbanization for Children: A Handbook on Child-Responsive Urban Planning*; United Nations Children's Fund (UNICEF): New York, NY, USA, 2018; 188p, ISBN 978-92-806-4960-4.
31. Global Designing Cities Initiative; National Association of City Transportation Officials. *Designing Streets for Kids*; Island Press: Washington, DC, USA, 2019; ISBN 978-1-64283-071-2.
32. Lin, S.; Huang, Y. Community Environmental Satisfaction: Its Forms and Impact on Migrants' Happiness in Urban China. *Health Qual Life Outcomes* 2018, 16, 236.
33. Xiao, X.; Han, X. Spatial Characteristics and Impacting Factors of Children's Outdoor Physical Activities in Urban Village Neighborhood: A Case Study of Pingshan Neighborhood in Shenzhen.

Mod. Urban Res. 2019, 1, 8–14. (In Chinese)

34. Zhang, Q.; Wu, S.; Wang, X. Multi-dimensional Construction of Children's Outdoor Play Space as an Old Community Renewal Catalyst. *Archit. Cult.* 2019, 11, 146–149. (In Chinese)
35. Liu, K.; Wei, Z. The Study of Neighborhood Streets on Supporting Children Street Activities from the Perspective of Children Growth. *Urban Dev. Stud.* 2019, 26, 16–24. (In Chinese)
36. Zhou, B.; Zhong, Y. Young Floating Population in City: How Outsiderness Influences Self-Esteem of Rural-to-Urban Migrant Children in China? *Int. J. Environ. Res. Public Health* 2022, 19, 1863.
37. Liu, L.; Shi, N.; He, Y.; Yang, H.; Pan, Y.; Yu, W.; Shen, Y.; Yu, Y.; Yang, Y. Practice of Child-Friendly City Construction. *City Plan. Rev.* 2022, 46, 44–52. (In Chinese)
38. Abu-Ghazze, T.M. Children's Use of the Street As a Playground in Abu-Nuseir, Jordan. *Environ. Behav.* 1998, 30, 799–831.
39. Krishnamurthy, S.; Steenhuis, C.; Reijnders, D.A.H.; Stav, T. Child-Friendly Urban Design: Observations on Public Space from Eindhoven (NL) and Jerusalem (IL); Technische Universiteit Eindhoven: Eindhoven, The Netherlands, 2018; ISBN 978-90-386-4495-0.
40. Wu, Z.; Lei, H. Connotation Analysis and Strategy Framework of Child-Friendly Streets: Based on the Concept of Chinese Child-Friendly City. *City Plan. Rev.* 2022, 46, 32–41+51. (In Chinese)
41. Zhang, X.; Liao, J.; Liu, Z.; Hui, Y. One-meter Three-dimensional Perception of the Street: An Exploration of Child-friendly Street Design. *Shanghai Urban Plan. Rev.* 2022, 6, 119–125. (In Chinese)
42. Chen, C.; Zhu, H. Spatial Cognition of Migrant Children in Urban Villages under the Background of Urbanization—A Case Study of Shipai Village, Tianhe District, Guangzhou. *J. South China Normal Univ. Soc. Sci. Ed.* 2016, 6, 110–117+191. (In Chinese)

Retrieved from <https://encyclopedia.pub/entry/history/show/113395>