JDPBE Journal of Design Practice in the Built Environment
eISSN 3140-4847

Research article
J. Des. Pract. Built Environ. 2026;1(1):99-108
https://doi.org/10.67639/jdpbe.260009

Reimagining children's playgrounds in an aging society: a comparative case study of intergenerational public space transformation

Jisun Lee

Department of Landscape Architecture, Graduate School of Kyung Hee University, Yongin, Korea

Received: Apr 2, 2026
Revised: May 13, 2026
Accepted: May 18, 2026
Published: Jun 30, 2026

Corresponding author
Jisun Lee
E-mail: zsun00@naver.com

Copyright © 2026 Korean Institute of Built Environment.
This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/4.0/) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ORCID
Jisun Lee
https://orcid.org/0009-0005-7948-4240

Conflict of interests
No potential conflict of interest relevant to this article was reported.

Funding sources
Not applicable.

Acknowledgements
Not applicable.

Availability of data and material
Upon reasonable request, the datasets of this study can be available from the corresponding author.

Author contributions
The article is prepared by a single author.

Ethics approval
Not applicable.

Declaration of generative AI
No AI tools were used in this article.

Abstract

Korea is experiencing a dual demographic transformation marked by rapid population aging and sustained low fertility, a shift that is placing growing pressure on the adequacy and allocation of urban public space. Children's playgrounds, once designed exclusively for child users, increasingly stand underutilized in neighborhoods where the child population has declined, even as the demand for accessible, neighborhood-scale space among older adults continues to rise. This study examines how children's playgrounds can be reimagined as inclusive, multigenerational public spaces by conducting a comparative case analysis of senior-friendly and intergenerational playground models in countries with advanced aging demographics, including Finland, Japan, Germany, and Switzerland, alongside a review of the current status and constraints of children's playgrounds in Korea. Case materials were drawn from official municipal and organizational sources, field observation in Tokyo, and the academic and policy literature, and were analyzed across six dimensions: development background, physical configuration, operational programming, target user groups, management structure, and policy support. The comparative analysis indicates that successful transformations share four common features: the retrofitting rather than wholesale replacement of existing playground infrastructure, the pairing of physical redesign with sustained programmatic and professional support, the deliberate design of shared spaces that encourage cross-generational contact, and the presence of community-based governance arrangements that sustain long-term use. These findings suggest that the repurposing of underused children's playgrounds offers a cost-effective and socially integrative response to demographic change, and they provide a comparative empirical basis for policy and design guidelines aimed at fostering age-inclusive public space in rapidly aging East Asian cities.

Keywords: aging society, children's playground, intergenerational public space, comparative case study, urban regeneration

Introduction

Korea is undergoing one of the most rapid demographic transitions observed globally. The total fertility rate has fallen to a historic low as of 2021, while the proportion of the population aged 65 and above continues to rise steadily (Statistics Korea, 2021). The country is expected

to enter super-aged society status in the near future, defined as having more than 20% of the population over the age of 65. This dual demographic pressure — an aging population alongside a shrinking cohort of children — is generating profound structural challenges for urban public infrastructure, exacerbating regional disparities and demanding a comprehensive reorganization of public services (Park, 2017). Theoretical analyses of low fertility have further demonstrated how such demographic transitions produce cascading effects on the demand for urban facilities and services (Jeong, 2009).

The consequences for urban public spaces are significant. Scholars have increasingly emphasized the importance of improving neighborhood-scale public spaces to support the daily lives and well-being of older adults (Kim, 2019), while others have called for public space design principles that accommodate the diverse needs of all age groups (Lee, 2011). At the same time, the rapid decline in the child population has led to falling utilization rates at children's playgrounds across the country, with many facilities falling into disrepair or facing closure.

The current cohort of older adults is anchored by the baby boom generation, born between 1955 and 1963. Unlike previous generations of elderly Koreans, this cohort exhibits a distinctly active lifestyle characterized by strong autonomy, diverse leisure interests, and a desire for intergenerational interaction — a profile described as the "active senior" (Lee & Lee, 2008). Research on housing preferences for this group has confirmed their preference for independent, activity-rich living environments (Park, 2014). These characteristics suggest that traditional elderly welfare facilities are insufficient to meet their needs, pointing instead toward open, flexible neighborhood public spaces.

In this context, repurposing underutilized children's playgrounds as inclusive, multigenerational public spaces has emerged as a pressing urban planning and landscape architecture challenge. Research has highlighted the latent potential of playgrounds to serve as community anchors beyond their traditional function as children's spaces (Hong, 2011), and the role of intergenerational public space use in fostering social cohesion has been widely recognized (Korea Culture and Tourism Institute, 2016). This study pursues three specific objectives: first, to conduct a comparative analysis of senior-friendly and intergenerational playground cases in countries with advanced aging demographics in order to derive design and operational implications; second, to examine the current status and constraints in the utilization of children's playgrounds in Korea; and third, to synthesize these findings into actionable policy and design directions. Guided by the vision of an era defined by human dignity and coexistence (Lee & Ko, 2019), this study aims to contribute to the resolution of the interconnected challenges of community vitalization, intergenerational exchange, and the efficient reuse of neglected urban public assets.

Literature review

1. Aging society and the transformation of urban public space

In an aging society, urban public spaces play a role far beyond the provision of leisure — they serve as essential infrastructure supporting the physical and mental health of older

adults. Accessibility, safety, and the facilitation of social interaction have been identified as the core design principles for elderly-friendly public spaces (Kim, 2019). Studies of elderly welfare facilities have documented persistent shortcomings in planning standards and professional expertise, with many facilities relying on improvised arrangements rather than systematic design (Ju & Moon, 2015), underscoring the need for new types of public spaces that can compensate for these limitations.

Elderly households exhibit a high degree of dependence on neighborhood-scale public spaces (Heo, 2017), and neighborhood-embedded public spaces are directly linked to residents' quality of daily life (Lee, 2011). The active senior cohort pursues self-realization and seeks a "third chapter of life" characterized by independence, varied hobbies, and active intergenerational engagement (Lee & Lee, 2008). This profile amplifies demand for open, flexible public spaces within residential neighborhoods that support a wide range of activities beyond the passive use associated with conventional elderly facilities.

2. Current status and the need for transformation of children's playgrounds

Children's playgrounds in Korea are publicly accessible spaces typically located within residential developments or urban parks, governed by relevant legislation. Despite a nationally significant number of these facilities, declining enrollment in younger age groups has led to steadily falling utilization rates, with many playgrounds falling into disrepair or outright abandonment (Safety Management Support Agency, 2022). Research has highlighted the potential for playgrounds to transcend their role as children-only spaces and function as shared community resources for residents of all ages (Hong, 2011).

International experience offers instructive precedents. A systematic review of place-making strategies for aging populations documents the transformation of children's playgrounds into senior playgrounds and intergenerational public spaces across multiple countries, identifying Finland's LAPPSET Senior Park as a flagship example (Loukaitou-Sideris et al., 2014). The value of public spaces as sites of community cohesion across age groups has been extensively documented (CABE Space, 2007), and the principles for creating successful public spaces have been codified in practitioner guides (PPS, 2000).

3. Application of comparative case study methodology

Comparative case study research enables the identification of both common patterns and context-specific differences across phenomena that emerge under distinct contextual and institutional conditions, and it has been widely employed in urban planning and landscape architecture research to derive policy implications. In particular, the in-depth analysis of a small number of cases is useful for revealing the detailed mechanisms of design and operation, along with the contexts in which they function, in ways that large-scale statistical data often cannot capture. This approach is especially well suited to research on age-friendly public space transformation, where the specific configuration of physical design, operational programming, and governance

arrangements within each case carries explanatory weight that aggregate statistics alone cannot convey. Cross-national comparison further allows the contextual conditions underlying successful transformation in one setting to be examined against the institutional and demographic circumstances of another, supporting the cautious derivation of implications for contexts, such as Korea's, that are undergoing similar demographic transitions.

Following this tradition of comparative case study research, the present study establishes six analytical dimensions — development background, physical configuration, operational programming, target user groups, management structure, and policy support — through which international cases are systematically compared. This multidimensional framework contributes not merely to the presentation of individual cases, but to the structural identification of commonalities and differences across cases and the derivation of implications applicable to the Korean context.

Methods

1. Scope of the study

The spatial scope of this study encompasses urban public spaces related to children's playgrounds and senior spaces across the Republic of Korea. Reflecting the comparative case study approach adopted in this research, the content scope covers four domains: the current status and projected trajectory of the aging society; the utilization characteristics and challenges of domestic children's playgrounds; international cases of senior playground and children's playground repurposing; and the proposal of effective utilization strategies for an aging society.

2. Case selection criteria and data collection

This study selected Finland, Japan (Tokyo), Germany, and Switzerland as the subjects of comparative case analysis. The case selection criteria were as follows: first, countries that experienced population aging earlier than Korea and have accumulated substantial policy and spatial responses over an extended period; second, countries with concrete, documented instances of converting children's playgrounds or public spaces into senior-friendly or intergenerational models, verifiable through literature or official sources; and third, countries for which sufficient information — from development background through operational structure — is publicly available to support comparative analysis. Finland was selected for offering one of Europe's most systematized senior playground models through the LAPPSET-disseminated Senior Park, while Japan, sharing an East Asian demographic context similar to Korea's, offers high comparative value as a country that has implemented related policies roughly two decades earlier. Germany and Switzerland were selected as representative cases of intergenerational public spaces featuring community self-governance models.

Data were collected through three channels. First, a field visit was conducted at the Nursing Prevention Park in Tokyo, Japan, to directly observe its physical configuration and patterns

of use. Second, the academic and policy literature — including CABE Space (2007), Loukaitou-Sideris et al. (2014), and PPS (2000) — was reviewed. Third, official sources for each case were consulted, including LAPPSET's official website (LAPPSET, 2022) and population statistics from the KOSIS National Statistical Portal and e-Regional Indicators.

It should be noted that Lafent (2026), a specialized landscape architecture media outlet, was used in this study solely as a supplementary source for case identification rather than as academic evidence.

3. Case analysis framework

Each case was systematically analyzed across six dimensions: (1) development background and rationale, (2) physical configuration (facilities and spatial design), (3) operational programming, (4) target user groups, (5) management structure, and (6) policy support structures. This framework was designed to provide a consistent basis for cross-case comparison beyond simple case description, with the analytical results presented as a comparative table in Chapter 4. In addition, regional aging indicators from KOSIS e-Regional Indicators (2026) were examined alongside domestic playground utilization trends, with the results reported in Section Results.1.

Results

1. Current status of children's playgrounds in Korea

According to the Safety Management Support Agency (2022), a substantial number of children's play facilities operate nationwide; however, the continued decline in the younger population has resulted in declining utilization and physical deterioration at many facilities. This trend is particularly pronounced in rural areas and small and medium-sized cities undergoing rapid population aging, where declining child populations and constrained management budgets jointly accelerate the deterioration of facility quality. Regional aging index data from the KOSIS e-Regional Indicators show that these areas exhibit levels of population aging above the national average, suggesting a structural mismatch between the demand for children's playgrounds and the demographic composition of these regions. This evidence provides an empirical basis for pursuing the repurposing of existing facilities in line with changing demographics, rather than their wholesale demolition.

2. Comparative analysis of international cases

The senior-friendly and intergenerational public space cases of Finland, Japan, Germany, and Switzerland were comparatively analyzed across six dimensions — development background, physical configuration, operational programming, target user groups, management structure, and policy support — with results presented in Table 1.

Finland's LAPPSET Senior Park integrates strength training equipment, balance training

Table 1. Comparison of international senior-friendly and intergenerational public space cases

Dimension	Finland (LAPPSET Senior Park)	Tokyo, Japan (Nursing Prevention Park)	Germany/Switzerland (Intergenerational Public Spaces)
Development background	Municipally led age-friendly city policy	Senior health promotion policy following 2000s nursing care insurance reform	Community-led intergenerational integration movement
Physical configuration	Strength and balance training equipment, cognitive stimulation apparatus co-located with children's play structures	Fall-prevention tracks, rehabilitation-oriented exercise equipment, multipurpose rest areas	Multipurpose exercise equipment, allotment gardens, rest areas, board game tables
Operational programming	Professional exercise coaches in regular attendance	Programs operated in conjunction with neighboring medical institutions	Resident-led autonomous programming
Target user groups	Adults aged 65+ and children (shared use)	Older adults requiring rehabilitation and local residents	All age groups (intergenerational)
Management structure	Direct municipal management	Joint operation between medical institutions and local government	Resident self-governance
Policy support	National-level policy for senior public facility provision	Local government support based on nursing care insurance law	Local community support programs

Compiled by the author based on CABE Space (2007), LAPPSET (2022), and Loukaitou-Sideris et al. (2014).

facilities, and cognitive stimulation apparatus to support the physical and cognitive functioning of users aged 65 and above. Developed under municipal leadership with professional exercise coaches in attendance, the park positions senior equipment alongside children's play structures within the same space, facilitating natural intergenerational contact. The Nursing Prevention Park in Tokyo, Japan, is distinguished by its integrated operation with neighboring medical institutions, featuring fall-prevention tracks, rehabilitation-oriented exercise equipment, and multipurpose rest areas. Intergenerational parks in Germany and Switzerland arrange multipurpose exercise facilities, allotment gardens, rest spaces, and puzzle and chess tables to enable all age groups to use the same space simultaneously, with community self-governance models fostering residents' active ownership. Core principles for creating elderly-friendly public spaces — accessibility, safety, and support for social interaction — have been synthesized from international cases (Loukaitou-Sideris et al., 2014), while user participation, multipurpose activity support, and community linkage are identified as the critical elements of successful transformation (PPS, 2000). The positive community impact of public spaces is maximized when they are tightly integrated into the everyday lives of residents across age groups (CABE Space, 2007).

3. Implications derived from the comparative analysis

The key lessons derived from the international case analysis are as follows. First, remodeling existing playground structures rather than demolishing them — co-locating senior equipment with existing children's apparatus — proves superior in both cost efficiency and sustainability. Second, physical transformation alone is insufficient; software-side support systems including professional coaching, medical institution linkage, and regular programming are confirmed as the critical determinants of sustained space activation. Third, intergenerational design provides both children and older adults with opportunities for cross-generational contact, contributing to the alleviation of social isolation and the strengthening of community bonds. Fourth, community self-governance models in which residents directly participate in space operation and

management are effective in fostering attachment and encouraging sustained use. Evidence that such functional transformation leads to strengthened local identity and improved quality of life has also been documented domestically (Public Design Newsletter, 2021).

Discussion

1. Scholarly implications: a comparative case approach to research on public space repurposing

Unlike prior approaches centered on surveys or expert interviews, this study provides empirical grounding for the intergenerational transformation of children's playgrounds by comparing implemented cases from multiple countries with advanced aging demographics within a consistent analytical framework. In particular, the analysis spanning six dimensions — from development background through management structure — addresses the limitations of prior research that often stopped at the level of individual case description, structurally revealing common patterns across cases, such as retrofitting rather than demolition and the importance of programmatic support. However, given the limited number of cases examined, further validation is needed to determine whether these patterns hold consistently across a broader range of countries and regions.

2. Policy implications: relevance to the Korean context

The policy support structures identified in the international cases — Japan's nursing care insurance-based support and Finland's national-level provision of senior facilities — offer direct implications for Korea's policy environment. Current Korean legislation related to children's playgrounds is focused primarily on safety management, with no separate institutional basis or financing structure established to support intergenerational transformation. The cases of Japan and Finland demonstrate that such transformations can be sustained more stably when linked to existing welfare and health policy frameworks, suggesting that Korea, too, should examine financing approaches that draw on linkages with existing programs such as long-term care insurance or community-integrated care initiatives.

3. Design implications: a retrofit-oriented rather than demolition-oriented approach

The "retrofit rather than demolish" principle commonly observed across the international cases carries important design implications for Korea's children's playground policy. Because many of Korea's children's playgrounds occupy constrained sites, a gradual retrofitting approach — converting portions of existing facilities into senior-friendly elements such as fall-prevention flooring, low-intensity exercise equipment, and rest areas — may be a more realistic alternative than adding entirely new facilities. This approach offers advantages not

only in cost efficiency but also in naturally encouraging space-sharing between existing users (children and their guardians) and new users (older adults).

4. Limitations of the study

This study is subject to limitations inherent to the comparative case study methodology with respect to generalizability. The cases analyzed are limited to Finland, Japan, Germany, and Switzerland, and further verification is required to determine whether these cases can be directly applied to Korea's social and cultural context. In addition, this study is based on data collected through literature, official sources, and field observation, and therefore does not directly capture the perceptions and needs of actual users — older adults and the guardians of children. Future research should verify the applicability of the implications derived here to the Korean context through surveys or interviews with users of domestic children's playgrounds and nearby residents.

Conclusion

This study has explored directions for the repurposing of underutilized children's playgrounds as inclusive public spaces in response to Korea's aging society, set against the backdrop of a dual demographic transformation driven by rapid aging and persistently low fertility. The approach of deriving empirical implications through international comparative case analysis is expected to make a scholarly contribution by complementing existing research paradigms centered on surveys and expert interviews.

The synthesized findings show that successful intergenerational transformation in the cases of Finland, Japan, Germany, and Switzerland consistently depends on four shared elements: retrofitting rather than demolition, the pairing of physical transformation with software-side support, space design that encourages cross-generational contact, and resident self-governance structures. These findings demonstrate that children's playgrounds can move beyond the binary choice of demolition or continued use as children-only facilities, revealing both the practical potential and the social necessity for their transformation into sustainable public spaces accessible to all ages.

These implications carry multilayered significance at the social and policy levels. Socially, repurposing neglected playgrounds into inclusive spaces is expected to revitalize local communities, with the natural surveillance effect generated by increased space activation additionally contributing to crime prevention and neighborhood safety. Culturally, intergenerational exchange programs carry a dual benefit: alleviating social isolation among the elderly while simultaneously providing children with socialization experiences (Korea Culture and Tourism Institute, 2016). From a policy standpoint, the comparative case findings of this study can serve as evidence-based input for national and local government planning related to children's playground policy, urban park master plans, and age-friendly city initiatives. In particular, linkage with regional aging indicators from KOSIS enables the objective identification of

priority sites for playground transformation, directly informing the development of a staged policy roadmap.

The most significant contribution of this study lies in proposing a new paradigm that moves beyond the binary choice of demolition or continued use as children-only facilities, toward the transformation of neglected children's playgrounds into inclusive, sustainable public spaces accessible to people of all ages. Given the methodological limitations of comparative case study research (see Section Discussion.4), future research should expand the scope of inquiry to include actual user behavior surveys, expert in-depth interviews, and the development of concrete design guidelines, with the aim of producing specific design and operational frameworks suited to an aging society.

References

CABE Space. (2007). *It's our space, 16*. CABE.

Heo, J. (2017). *Leisure time allocation and leisure place choice by household characteristics* [Doctoral dissertation]. Seoul National University.

Hong, I. (2011). *Playgrounds and village building*. Korean Urban Research Institute.

Jeong, S. (2009). *Theoretical approaches to low fertility*. *Korean Journal of Population Studies*, *32*(2), 162-183.

Ju, H., & Moon, J. (2015). A study on leisure programs and spatial configuration of senior welfare centers according to the changed lifestyle of the elderly. *Korean Institute of Interior Design*, *24*(3), 176-185.

Kim, Y. (2019). *A study on the planning elements and policies of urban neighborhood public spaces for active aging* [Doctoral dissertation]. Seoul National University.

Korea Culture and Tourism Institute. (2016). *The role and challenges of culture in an aging era*. KCTI.

KOSIS e-Regional Indicators. (2026). *You can view key indicators in various fields across different regions of the country*. https://kosis.kr/visual/eRegionJipyo/index/index.do

Lafent. (2026). *Lafent*. https://www.lafent.com

LAPPSET. (2022). *A senior park in the yard of a health center*. https://www.lappset.com/Products/References/Senior-Park-Finland

Lee, G., & Ko, M. (2019). *A life of human dignity: the era of coexistence*. Korea Manifesto.

Lee, M., & Lee, H. (2008). A study on urban senior housing services for active seniors. *Proceedings of the Korean Institute of Interior Design*, *10(1)*, 223.

Lee, S. (2011). *A study on the development of guidelines and methods for creating life-embedded urban public spaces*. Architecture and Urban Research Institute.

Loukaitou-Sideris, A., Levy-Storms, L., & Brozen, M. (2014). *Placemaking for an aging population*. Lewis Center for Regional Policy Studies.

Park, B. (2017). The relationship between low fertility/aging and social welfare expenditure: a comparative study between metropolitan cities and provinces. *Korean Journal of Local Government Studies*, *31*(2), 87-116.

Park, C. (2014). *Analysis of preference factors for downtown silver housing among the baby boom generation* [Master's thesis]. Kwangwoon University.

Project for Public Spaces (PPS). (2000). *How to turn a place around: a handbook for creating successful public spaces*. PPS.

Public Design Newsletter. (2021). *Special feature, No. 8*. https://publicdesign.kr/brd/board/925/L/menu/926?brdType=R&thisPage=1&bbIdx=275

Safety Management Support Agency. (2022). *SMSA*. https://cps.or.kr

Statistics Korea. (2021). *Vital statistics survey: total fertility rate*. Statistics Korea.