

Research on the Age-Adapted Renovation of Sports Facilities in Old Communities of Hunan

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Abstract: To build a leading sports nation and enhance public health, it is essential to fully integrate sports into daily life, promoting universal health through nationwide fitness, and thereby fostering overall well-being. Constructing a public sports service system that is universally accessible and suitable for all ages has become a critical issue. As a populous province, Hunan is experiencing deepening aging, and the level of age-adapted sports facilities in old communities directly impacts the quality of elderly participation and their health and well-being. Focusing on old communities across Hunan, this study systematically reviews existing problems in age-adapted sports facilities through literature review, field research, and case analysis. Combining national policy guidance with local practices, it proposes pathways and countermeasures for renovating sports facilities to better serve the elderly. This research aims to provide theoretical support and practical references for building elderly-friendly community environments and advancing the construction of sports power.

Keywords: Sports power; Old communities; Sports facilities; Age-adapted renovation

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1. Introduction

Outlined strategic tasks and major initiatives for the health industry over the next five years, emphasizing the advancement of “Healthy China” construction. It highlighted placing the guarantee of people’s health as a strategic priority for development and implementing a national strategy to actively address population aging. The “National Fitness Plan (2021–2025)” further proposed promoting fitness activities for key demographics, increasing the age-friendliness of fitness facilities, researching and promoting sports and leisure projects suitable for the elderly, improving barrier-free environments in public fitness facilities, and organizing sports events tailored for older adults.

Data from the Seventh National Population Census indicates that in Hunan Province, the population aged 0 to

14 accounts for 19.52%, those aged 15 to 59 account for 60.60%, and those aged 60 and above account for 19.88%. Compared to the data from the Sixth National Population Census, the proportions of both the 0-to-14 age group and the population aged 60 and above have increased, indicating a gradually intensifying aging problem in Hunan. A large number of elderly residents live in old communities built in earlier decades. These areas suffer from limited sports and fitness spaces, outdated facilities, and poor age-adaptability, making it difficult to meet the growing demand for a “fitness + wellness” integrated lifestyle.

Therefore, within the context of building a sports power, advancing the age-adapted renovation of sports facilities in old communities is not only a livelihood project aimed at improving the quality of life for the elderly but also a critical step toward the deep integration of national fitness and public health ^[1].

2. Current status and problems of age-adapted sports facilities in old communities of Hunan

Field research conducted in typical old communities, such as Jinketuan Community in Changsha, Zhengxiang District in Hengyang, and the Textile Factory Residential Area in Lengshuitan, Yongzhou, reveals that although various regions have actively promoted the renovation of old communities in recent years, and some initial achievements have been made regarding the age-adaptability of sports facilities, many common problems persist.

By comprehensively examining the current state of public spaces—including traffic organization, green landscapes, activity venues, and public service facilities—and employing questionnaire surveys and interviews, this study has accurately grasped the usage perceptions and behavioral patterns of the elderly population. This has helped identify specific age-adaptation deficiencies, providing solid data support for the formulation of renovation strategies.

2.1. Lack of Age-adapted design in facility configuration

Most communities still primarily rely on general-purpose fitness equipment. There is a significant shortage of specialized equipment designed for the physical characteristics of the elderly, such as low-intensity, high-safety, and easy-to-operate devices, including seated exercise bikes, upper-limb traction machines, and balance training equipment.

2.2. Unreasonable spatial layout and poor accessibility

Some fitness areas are located far from residential buildings and lack shading and rain-shelter facilities. The ground surfaces have not been treated for slip-resistance, and wheelchair access is restricted. Consequently, usage rates drop significantly during rainy or snowy weather, affecting the elderly’s sustained participation.

2.3. Insufficient service support and lack of professional guidance

Most communities do not have social sports instructors or volunteers to provide scientific fitness guidance. Consequently, the elderly are often unfamiliar with how to use the equipment correctly, posing sports-related risks. Additionally, there is a lack of supporting service facilities such as health monitoring stations, rest areas, and barrier-free restrooms ^[2].

2.4. Inadequate management and maintenance mechanisms

Some equipment becomes aged or damaged without being repaired or replaced in a timely manner, creating safety hazards. Although the “Regulations on the Use and Management of National Fitness Facilities and Equipment” stipulate that a regular assessment and scrapping mechanism should be established, there are still regulatory blind spots in its implementation at the grassroots level ^[3].

3. Policy drivers and local practice exploration

By analyzing domestic cases in cities such as Shaoyang, Changsha, Yongzhou, and Hengyang in Hunan Province, this study further enriches design concepts and reference bases. These practical cases demonstrate that the age-friendly renovation of sports facilities in old communities is feasible and worthy of promotion through spatial micro-renewal, refined facility allocation, and social participation.

In recent years, both the state and Hunan Province have successively introduced multiple policies to promote the age-friendly development of sports facilities. Since January 1, 2023, the “Administrative Measures for Sports Events” have been implemented. In an explanatory article, relevant officials from the Policy and Regulations Department of the General Administration of Sport of China stated that this measure emphasizes that sports administrative departments should strengthen event services and supervision to promote the balanced layout of national fitness facilities.

The Department of Natural Resources of Hunan Province issued the “Notice on Strengthening Planning and Land Protection to Support the Construction of National Fitness Venues and Facilities”, guiding localities to strengthen land protection and support the construction of national fitness venues and facilities. This aims to further make up for the shortcomings of fitness facilities around the people, strive to enhance the people’s sense of gain in sports, and promote the construction of a sports powerhouse province and a Healthy Hunan. It strengthens the land protection for national fitness venues and facilities, incorporating the construction land for sports venues and facilities into the annual land use plan for priority arrangement. It explicitly supports the construction of sports facilities in “prime locations” such as park green spaces, spaces under bridges, and inefficient lands, and encourages the compound use of idle lands, providing a policy basis for the “seizing every opportunity” construction in old communities.

3.1. Shaoyang city

In the practice of old communities in Zhongxin Road Subdistrict and Baichunyuan Subdistrict in Daxiang District, Shaoyang City, the renovation project uses a “dual engine” of “problem orientation + demand orientation”, deeply investigates residents’ pain points, and customizes renovation plans. In 2024, through a series of precise measures prioritizing people’s livelihood, 32 old communities in Daxiang District underwent a transformation from “old appearance to new look”, benefiting 5,404 households. The project involved a total of 198 buildings, with a total construction area of 469,390 square meters and a total investment of approximately 104 million RMB. This people’s livelihood project, benefiting thousands of families, not only renewed the urban landscape but also created a favorable atmosphere for the business environment in the construction sector, serving as a vivid practice of Daxiang District’s people-centered development philosophy.

The marble paving on the ground is wear-resistant, slip-resistant, beautiful, and atmospheric, becoming an “assured path” for residents to take a walk; the unified installation of drainpipes bid farewell to the mess of “aerial cobwebs”, and the barrier-free renovation of ground steps made travel more convenient for the elderly; the exterior wall renovation not only improved the aesthetics of the building but also made the house warm in winter and cool in summer through the addition of an insulation layer.

In a certain community in Baichunyuan Subdistrict, residents spontaneously established a “Renovation Supervision Group”, discussing the greening layout with the construction party and transforming idle open spaces into “pocket parks” integrating elderly leisure, fitness, and children’s entertainment. The renovation improves the environment, warms the people’s hearts, and unites the community. These age-friendly renovations of old communities have achieved remarkable effects in Daxiang District, Shaoyang City.

3.2. Changsha city

Jinke Yuan Community in Yuhua District, Changsha City, constructed an elderly fitness center that is highly popular among residents. Before exercising, the elderly must first undergo a physical test; if their blood pressure is high, the staff will advise them to postpone their workout. After passing the test, the elderly can choose different equipment for exercise

according to their needs.

The equipment in the gym is specifically designed for the elderly, helping them restore muscle strength and achieve effective exercise. Even wheelchair users can use it directly. The treadmill has a very slow starting speed, and the handrails on both sides are longer. Staff members provide guidance nearby to ensure the elderly exercise safely and happily.

In addition to building professional elderly fitness centers, many communities have also constructed table tennis courts and introduced outdoor fitness equipment for residents, including the elderly. During the renovation, an idle boiler room in the community was transformed into a multi-functional activity center for the elderly with an area of over 100 square meters, equipped with facilities such as a chess and card room, lighting, and restrooms. This not only provided a place for the elderly to rest and entertain but also beautified the community environment.

During the renovation of old communities, some neighborhoods, due to a high proportion of elderly residents, paid more attention to their needs. The age-friendly renovation of public spaces presented many highlights.

3.3. Yongzhou city

In various places in Lengshuitan District, Yongzhou City, urban areas are fully utilized to build public sports facilities in a “seizing every opportunity” manner in communities, park green spaces, waterfront greenways, and other areas, continuously improving the public fitness public service system and setting off a new upsurge in national fitness. Basketball courts and fitness trails are built using idle open spaces, creating a “garden + sports” model to achieve the integrated sharing of green spaces and sports spaces.

In recent years, Lengshuitan District has strengthened the supply of national fitness services, fully tapped into the potential of existing urban green spaces, and promoted the “garden + sports” construction model to achieve the open sharing of park green spaces. It has increased age-friendly sports facilities for different age groups according to local conditions. Citizens can both visit parks and exercise right at their doorsteps. Parks with pleasant scenery are bustling with people and have become popular destinations for citizens’ fitness and entertainment.

Lengshuitan District will take the construction of national fitness projects as a starting point, continuously increase investment and project applications, and persist in promoting and improving the construction of sports infrastructure throughout the district. This ensures that high-quality and grounded cultural and sports activities penetrate every corner of the district, allowing more people to share in the fruits of sports development and gain a tangible sense of happiness.

3.4. Hengyang city

The community renovation in Zhengxiang District, Hengyang City, constructed a roofed table tennis area with plasticized ground treatment, enhancing the user experience for the elderly. Age-friendly renovations are set up according to the needs of each elderly person’s physical condition, living situation, and personal wishes.

The district is also piloting the construction of a smart elderly care community, serving as a learning center for elderly education to lay the foundation for the elderly to integrate into digital life. Meanwhile, leveraging professional social organizations and social workers, it actively introduces social forces to help the elderly integrate into digital life better and faster.

For elderly people with different characteristics and family situations, age-friendly renovations have different emphases: thresholds are removed and handrails are installed in stairwells for wheelchair users, emergency alarms are installed; anti-wandering watches are issued for elderly people with dementia; and different light colors are used to increase visual assistance for elderly people with hearing impairments to distinguish between bedrooms and living rooms, etc.

These measures can not only promote the real implementation of age-friendly research but also practically improve the living environment of the elderly, having far-reaching significance for the development of elderly fitness and national health.

4. Path recommendations for advancing age-adapted renovation of sports facilities in old communities of Hunan

4.1. Scientific planning and improvement of the standards system

It is recommended that at the provincial level, the “Guidelines for Age-Adapted Construction of Sports Facilities in Hunan Communities” be developed. This should clearly define technical indicators such as the proportion of elderly fitness areas, types of equipment, barrier-free design, and safety protection. Age-adapted renovation should be incorporated into the overall plan for the renovation of old communities, achieving simultaneous planning, construction, and acceptance.

4.2. Tailored approaches and activation of existing space

Make full use of “prime locations” such as marginal lands, idle workshops, and spaces under bridges within communities. Combined with the exemption policies for construction engineering planning permits outlined in the “Notice”, encourage the construction of temporary and movable fitness facilities. Promote the integrated models of “Park + Sports” and “Green Space + Fitness” to enhance the comprehensive utilization efficiency of space.

4.3. Strengthening services and enhancing usage efficiency

Implement the requirements of the “National Fitness Plan” by regularly organizing social sports instructors and volunteers to conduct scientific fitness training, guiding the elderly on the correct use of equipment. Promote the linkage between community health service centers and fitness venues to establish a “Sports-Medicine Integration” service mechanism, providing health assessments and exercise prescription services.

4.4. Improving mechanisms to ensure long-term operation

Clarify that subdistricts or communities are the main management bodies, establishing systems for daily inspections, maintenance, and safety assessments. Equipment that has reached the end of its service life should be scrapped and updated promptly. Introduce third-party professional companies to participate in operations and maintenance. Explore a diversified co-management model of “government guidance + social participation + resident co-governance.”

4.5. Digital empowerment to promote smart age-adaptation

Install smart monitoring devices in fitness areas to achieve real-time collection and feedback of exercise data. Develop age-adapted fitness apps or mini-programs that provide functions such as voice prompts, operation guidance, and emergency calls, enhancing convenience and safety for the elderly^[4].

5. Conclusion

The construction of a sports power is not only reflected in the brilliant achievements of competitive sports but more so in the universal improvement of public health levels and the equitable accessibility of public sports services. With the continuous development of China’s social economy and technology, the average human lifespan has significantly extended. However, the accelerating aging process also brings many challenges. Residents’ demands for quality of life are constantly rising, while the lagging development of public spaces in old communities intensifies the contradiction with resident’s needs. As an important carrier for daily activities of the elderly, the public space within communities plays an irreplaceable role in addressing aging issues, and its environmental quality directly affects the subjective well-being and life satisfaction of the elderly.

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Disclosure statement

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