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Age-Friendly Construction Pathways for Community Health and Wellness Spaces from the Perspective of Active Ageing: A System Construction Study

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Abstract:
Against the background of population ageing, community sports and physical activity spaces have become important carriers for older adults' health maintenance, daily exercise, and social interaction. Based on active ageing theory, this study defines community health and wellness space as community sports and physical activity space centered on physical activity, rehabilitation exercise, health promotion, leisure communication, and social participation. Through theoretical analysis and system construction, this study identifies current deficiencies in accessibility, exercise support, safety protection, social interaction, and operation management, and proposes an age-friendly framework consisting of a spatial accessibility system, exercise support system, safety protection system, leisure interaction system, and collaborative governance system. The study suggests that community sports and physical activity spaces should shift from single facilities to continuous spatial networks, from ordinary fitness sites to age-friendly exercise-support spaces, and from one-time construction to continuous multi-actor operation, so as to better support older adults' health, participation, and safety.

Keywords:
active ageing, age-friendly design, community sports and physical activity space, community health and wellness space, system construction

1. Introduction

Population ageing is profoundly reshaping the spatial structure, service provision, and governance logic of urban communities. As the older population continues to grow, the needs of older adults are no longer limited to basic care, but have gradually expanded to health maintenance, physical exercise, rehabilitation support, leisure communication, psychological comfort, and social participation. As the primary spatial unit of older adults' everyday lives, the community not only undertakes the basic function of home-based ageing support, but has also increasingly become an important setting for health promotion, social interaction, and public service provision. Especially for older adults with limited mobility and relatively small daily activity ranges, the

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accessibility, safety, comfort, and activity-supporting capacity of community space directly affect their quality of life and level of social integration.

The theory of active ageing provides an important perspective for the construction of community health and wellness spaces. In Active Ageing: A Policy Framework, the World Health Organization defines active ageing as the process of optimizing opportunities for health, participation, and security in order to enhance quality of life as people age (WHO, 2002). This theory goes beyond the traditional view of older adults as passive recipients of care, and emphasizes that older adults still have the capacity to maintain health, participate in society, and realize their own value. Rowe and Kahn's model of successful ageing also emphasizes that a good state in later life includes not only the reduction of disease and disability, but also the maintenance of high physical and cognitive functioning and continued engagement with life (Rowe & Kahn, 1997). Therefore, responding to population ageing at the community level should not merely mean increasing elderly care facilities or care resources. More importantly, it requires spatial design and service organization to create conditions for older adults to remain active, maintain health, and participate in society.

In studies on age-friendly cities and healthy communities, the community environment is regarded as an important factor affecting older adults' health and quality of life. In Global Age-friendly Cities: A Guide, the WHO identifies outdoor spaces and buildings, transportation, housing, social participation, respect and social inclusion, community support, and health services as important dimensions of age-friendly city construction (WHO, 2007). Age-friendly communities are not simply built through individual facilities; rather, they are comprehensive systems composed of the physical environment, social environment, service system, and policy support (Menec et al., 2011). At the same time, age-friendly city construction should also pay attention to the social integration and public participation of older adults in urban environments, instead of regarding older adults only as passive recipients of care (Buffel et al., 2012). Chinese studies have also pointed out that the construction of age-friendly communities should not focus only on improving the physical environment, but should also attach importance to the social environment, resident participation, and multi-actor co-construction mechanisms (Wang & Ren, 2015). Community planning under the orientation of healthy cities also emphasizes that, as the basic unit for implementing the healthy city strategy, communities should pay attention to the coordination between people's activity needs, healthy lifestyles, and ecological environments (Wang, 2015). Therefore, community space is no longer merely a residential background; it has become an important support system that influences older adults' health behavior, lifestyle, and social relationships.

In this study, community health and wellness space specifically refers to community sports and physical activity space embedded in the community life circle, with older adults' daily physical activity, rehabilitation exercise, health promotion, leisure communication, and social participation as its core functions. Its spatial forms include community walking paths, fitness equipment areas, public squares, outdoor activity spaces, public green spaces, ground-floor or semi-open activity areas, resting nodes, and related supporting service spaces. Its functional content includes age-friendly exercise support, safety protection, health guidance, neighborhood interaction, and activity organization. In other words, the community health and wellness space discussed in this study is essentially an age-friendly community public space system oriented toward physical activity and health promotion.

From the current situation, the construction of community health and wellness spaces still faces many prob-

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lems. On the one hand, some communities lack sufficient sports and physical activity spaces, and the stock of public activity spaces is limited. Existing spaces are often unable to meet older adults' high-frequency, short-distance, and low-cost daily activity needs. Existing research shows that older adults' daily behavior is highly dependent on the community environment. Medical visits, shopping, and leisure activities are the main behaviors in their daily lives, and they are also important indicators for measuring quality of life and well-being (Zhou & Chai, 2013). On the other hand, some existing fitness facilities in communities still take the general resident as the default user, while ignoring older adults' physical functions, behavioral habits, safety risks, and social needs. Although physical exercise plays a positive role in promoting the physical and social health of older adults, older adults' exercise behavior in China still faces problems such as limited exercise choices, insufficiently scientific exercise intensity, concentration of exercise time in the morning, and a relatively high proportion of individual exercise (Xu & Li, 2021). Therefore, the construction of community health and wellness spaces should not remain at the level of simply providing fitness equipment. Instead, it should start from the perspective of active ageing and construct a spatial system that is accessible, safe, multifunctional, participatory, and sustainable.

Based on this, this study analyzes the age-friendly construction pathways of community health and wellness spaces from the perspective of active ageing. It adopts a theoretical analysis and system construction approach, and focuses on three questions:

First, what requirements does active ageing put forward for community health and wellness spaces?

Second, what practical difficulties currently exist in the age-friendly construction of community health and wellness spaces?

Third, how can a community health and wellness space system oriented toward older adults' health promotion and social participation be constructed?

Through the above analysis, this study aims to provide theoretical references for age-friendly community construction, old community renewal, and the age-friendly transformation of community sports and physical activity spaces.

2. Theoretical Basis and Conceptual Definition

2.1 The theoretical connotation of active ageing

Active ageing is the basic theoretical starting point for understanding the age-friendly construction of community health and wellness spaces. Different from the traditional view that sees older adults as a declining, dependent, and care-receiving group, active ageing emphasizes that older adults still have the ability to maintain health, participate in society, and achieve self-development. The WHO defines active ageing as the process of optimizing opportunities for health, participation, and security, with the aim of improving people's quality of life as they age (WHO, 2002). This definition indicates that active ageing is not simply about extending life expectancy, nor is it merely about improving medical care. Rather, it emphasizes continuous support for older adults at the physical, psychological, and social levels.

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From the perspective of theoretical development, active ageing is closely related to concepts such as successful ageing, healthy ageing, and productive ageing. Rowe and Kahn argue that successful ageing includes a low risk of disease and disability, high physical and cognitive functioning, and active engagement with life (Rowe & Kahn, 1997). Walker further points out that active ageing should not be narrowly understood as economic participation, but should include diverse forms of participation in social, cultural, family, and community life (Walker, 2002). Bowling's study also shows that older adults understand active ageing in a multidimensional way, including not only physical health, but also psychological state, social relationships, independent living, and life meaning (Bowling, 2008). Therefore, active ageing is essentially a comprehensive view of ageing development. On the basis of the traditional concept of care, it further emphasizes supporting older adults to continue to have mobility, participation opportunities, and life dignity.

For community health and wellness spaces, active ageing puts forward at least three requirements. First, space should support older adults' health maintenance, including physical activity, rehabilitation exercise, chronic disease prevention, and daily health management. Second, space should support older adults' social participation, including neighborhood communication, group activities, interest-based communities, and participation in community public affairs. Third, space should provide safety protection, including barrier-free environments, fall-prevention design, resting facilities, emergency support, and continuous maintenance mechanisms. Therefore, from the perspective of active ageing, community health and wellness spaces should not be simply understood as fitness equipment areas or elderly activity rooms. They should become multifunctional spatial systems that support older adults' health, participation, and safety.

2.2 Conceptual definition of community health and wellness space: Taking community sports and physical activity space as the core

Health and wellness usually include two meanings: health promotion and ageing support. In a broad sense, community health and wellness spaces may include community health service stations, elderly care service stations, day-care centers, rehabilitation spaces, activity rooms, and outdoor public spaces. However, an overly broad definition may blur the research object and make it difficult to form clear spatial construction pathways. Based on the purpose of this study, community health and wellness space is defined as an age-friendly public space system centered on community sports and physical activity space. It refers to space embedded in the community life circle and serving older adults' daily physical activity, rehabilitation exercise, health promotion, leisure communication, and social participation.

This definition has two bases. First, older adults' daily activities are highly dependent on the community life circle. In their review of spatial behavior among older adults in China, Zhou and Chai point out that medical visits, shopping, and leisure activities are the main behaviors in older adults' daily lives. Among them, leisure behavior plays an important role in improving quality of life, and older adults' leisure range is usually concentrated within the community and its walkable surroundings (Zhou & Chai, 2013). This indicates that walkable spaces within and around the community are the most direct spatial basis for older adults' daily health and wellness activities. Second, community public space not only undertakes activity functions, but also supports social interaction. Zhou et al. point out that community public space can meet older adults' physiological needs for healthy activities, and at the same time provide a spiritual place for social participation and neighborhood interaction from the perspective of social communication (Zhou et al., 2020). Therefore, community

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health and wellness space centered on physical activity is not only a place for bodily exercise, but also a place for social interaction and community integration.

The neighborhood built environment is closely related to older adults' physical activity, active travel, and walking behavior. Existing studies have shown that park size, spatial distance, facility characteristics, and accessibility affect residents' physical activity participation in neighborhood parks (Kaczynski et al., 2008). The quality of open spaces, path conditions, and environmental characteristics also affect older adults' walking activities (Sugiyama & Ward Thompson, 2008). Systematic reviews further indicate that the neighborhood physical environment is closely associated with older adults' active travel and total physical activity. Factors such as walkability, facility accessibility, traffic safety, and spatial attractiveness all influence older adults' activity participation (Cerin et al., 2017; Barnett et al., 2017). Therefore, as an important carrier of older adults' daily physical activity, community health and wellness spaces should be systematically constructed in terms of spatial accessibility, facility configuration, environmental comfort, and activity support.

The community health and wellness space discussed in this study includes not only physical spaces such as walking paths, fitness points, activity squares, public green spaces, ground-floor activity areas, and resting nodes, but also supporting elements such as exercise guidance, safety reminders, activity organization, facility maintenance, and resident participation. Its core is not whether there is equipment, but whether it can form a spatial system that supports older adults to participate in physical activity and community life continuously, safely, scientifically, and pleasantly. Based on this understanding, the construction of community health and wellness spaces should shift from single-point facility configuration to continuous spatial networks, from ordinary fitness sites to age-friendly exercise-support spaces, and from passive use to active participation by older adults.

2.3 Requirements of active ageing for community health and wellness spaces

From the perspective of active ageing, the construction of community health and wellness spaces should not only respond to the need for physical exercise, but should also respond to the three goals of health, participation, and security. First, in the health dimension, community health and wellness spaces should provide older adults with low-threshold, short-distance, and sustainable conditions for physical activity. Xu and Li point out that physical exercise has positive effects on older adults' physical function, cardiac function, muscle strength, psychological state, and cognitive effects, and can also promote older adults' "re-socialization" (Xu & Li, 2021). At the same time, older adults' physical exercise needs scientific guidance, and exercise items, intensity, frequency, duration, and forms should all be reasonably designed according to individual health conditions.

Second, in the participation dimension, community health and wellness spaces should promote older adults' social interaction. Existing research on leisure life satisfaction among empty-nest older adults in Beijing shows that the provision of community leisure services has an important influence on their leisure life satisfaction, and empty-nest older adults tend to choose low-cost leisure activities within a small activity radius (Li et al., 2010). This suggests that leisure and exercise spaces at the community level are particularly important for older adults, especially empty-nest older adults. If community health and wellness spaces can provide opportunities for group activities, neighborhood communication, and interest-based participation, they can

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further play a role in social support beyond physical exercise.

Third, in the security dimension, community health and wellness spaces should provide safe, comfortable, and sustainable environmental support. Lawton and Nahemow's environmental press theory argues that the match between individual competence and environmental pressure affects older adults' adaptation to the environment. When environmental pressure exceeds individual competence, the spatial environment may shift from a supportive factor to a source of pressure (Lawton & Nahemow, 1973). Therefore, community health and wellness spaces must strengthen details such as anti-slip surfaces, lighting, handrails, resting facilities, signage, emergency response, and maintenance according to older adults' physical functions and behavioral characteristics. Some scholars have also pointed out that for older adults with declining physical function, limited travel range, and strong needs for home-based ageing, age-friendly housing and a friendly community environment are both indispensable. Their purpose is to enhance older adults' independent living ability through appropriate environmental support and effective services (Wang et al., 2020).

3. Practical Difficulties in the Age-Friendly Construction of Community Health and Wellness Spaces

3.1 Insufficient spatial supply and weak layout accessibility

Community health and wellness spaces first face the problems of insufficient spatial supply and weak accessibility. In many old communities, the stock of public space is limited. Existing vacant land is often occupied by parking, temporary facilities, or commercial activities, and there is little space truly available for older adults' physical activity, rest, communication, and rehabilitation exercise. Even when some communities are equipped with fitness equipment or activity sites, they often suffer from remote locations, discontinuous paths, and disconnection from daily movement routes, resulting in spaces that older adults can see but cannot conveniently use.

Accessibility is especially important for older adults. Their physical function, mobility, and sense of safety affect their willingness to go out. Zhou and Chai point out that older adults' leisure space choices in China are relatively stable, and their leisure range is mainly concentrated within the community and its walkable surroundings. Safety and convenience are the factors they are most concerned about when choosing leisure places (Zhou & Chai, 2013). Li et al. also show that empty-nest older adults tend to choose low-cost leisure activities within a small activity radius (Li et al., 2010). This means that if community health and wellness spaces are not embedded in older adults' daily living radius, it will be difficult to form stable use.

From the perspective of environmental health, older adults' walking and physical activity are influenced by neighborhood safety, facility accessibility, traffic environment, spatial aesthetics, and service distance (Van Cauwenberg et al., 2011; Yen et al., 2009). The neighborhood physical environment has an important influence on older adults' active travel. The continuity of walking paths, traffic safety, destination accessibility, and environmental attractiveness all affect older adults' willingness to travel and their activity level (Cerin et al., 2017). Therefore, age-friendly construction of community health and wellness spaces should not only focus on the site itself, but also on the complete path from older adults' residences to the exercise space.

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In addition, the layout of age-friendly facilities should also consider the accessibility of public services. For example, a study on the age-friendly layout of medical facilities in Hefei shows that the convenience of medical travel for older adults is closely related to the layout of medical facilities. Community health service centers have strong accessibility and can play a basic supporting role in the urban medical facility system (Li et al., 2019). Although this study focuses on medical facilities, its discussion of age-friendly facility layout and travel convenience for older adults is also enlightening for the configuration of community health and wellness spaces.

3.2 Single exercise functions and insufficient differentiated support

At present, many community sports and physical activity spaces are still mainly composed of ordinary fitness equipment, activity squares, and simple walking paths. They lack differentiated design for different groups of older adults. In fact, older adults are not a homogeneous group. Young-old adults, oldest-old adults, older adults with chronic diseases, older adults undergoing rehabilitation, empty-nest older adults, and active older adults differ significantly in exercise ability, health status, social needs, and safety risks. If community health and wellness spaces are equipped only with uniform fitness equipment, they can hardly meet older adults' multi-level needs.

Older adults' exercise behavior itself also faces the problem of insufficient scientific guidance. Xu and Li point out that older adults in China participate in physical exercise at a relatively high frequency, but there are still problems such as insufficient understanding of the fitness effects of different exercise items, relatively low exercise intensity, short exercise duration, concentration of exercise time in the morning, and a high proportion of individual exercise (Xu & Li, 2021). This shows that community health and wellness spaces should not merely provide exercise facilities passively. They also need to guide older adults to form more scientific and reasonable exercise behavior through spatial organization, signage, activity arrangements, and professional guidance.

3.3 Weak safety details and high risk of spatial use

Safety is the bottom line for the age-friendly construction of community health and wellness spaces. Due to declining physical function, weakened balance, changes in visual and auditory ability, and the influence of chronic diseases, older adults are more vulnerable to falls, collisions, fatigue, and sudden health problems. In reality, although some community exercise spaces have basic activity functions, they still have deficiencies in ground paving, slope treatment, handrail installation, night lighting, seat configuration, signage systems, and equipment instructions. Once the spatial environment lacks age-friendly details, it will not only reduce older adults' willingness to use it, but may also increase the risk of exercise injury and safety accidents.

A study on healthy community micro-renewal from the perspective of age-friendly and child-friendly communities points out that old community micro-renewal should respond to the spatial needs of older adults and children in terms of safety, identifiability, experience, and sociability, and should promote outdoor walking, physical activity, and social interaction through the renewal of shared streets, important entrances and exits, public activity nodes, and green spaces (Zheng et al., 2021). This provides a direct implication for the construction of community health and wellness spaces: age-friendly design is not simply about adding facilities, but about carrying out whole-process safety design around older adults' movement processes and activity sce-

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narios.

3.4 Insufficient leisure interaction and weakened social participation function

Community health and wellness space is not only a space for physical exercise, but also a space for leisure and social interaction. In reality, however, some community exercise spaces place too much emphasis on equipment configuration and site functions, while ignoring older adults' needs for staying, communicating, watching, and participating in group activities before and after exercise. Older adults participate in community physical activities not only to exercise, but also to seek companionship, communication, and a sense of belonging. If the space lacks seats, shade, boundary enclosure, staying nodes, and activity organization mechanisms, it will be difficult to form sustained social interaction.

Some studies point out that age-friendly healthy communities place more emphasis on older adults' sense of participation and improvement of quality of life. Their components cover both the physical environment and the social environment, including community environment, healthy transportation, medical care, supportive services, and older adults' social participation (Hu & Huang, 2021). Wang and Ren also argue that age-friendly community construction should go beyond physical environmental improvement and attach importance to the social environment, resident participation, and multi-actor co-construction (Wang & Ren, 2015). Therefore, the construction of community health and wellness spaces should not only ask "where older adults exercise," but should further consider "how older adults communicate, participate, and receive support through exercise."

3.5 Insufficient operation and management, and imperfect mechanism for continuous use

Community health and wellness spaces also face the problem of "emphasizing construction while neglecting operation." Some communities have installed fitness facilities and activity sites in renewal projects, but they lack subsequent maintenance, updates, activity organization, and user feedback mechanisms, resulting in low spatial use efficiency. Problems such as ageing equipment, damaged lighting, broken ground surfaces, and space occupation directly affect older adults' use experience and sense of safety if they are not dealt with in time.

Healthy community construction itself is a multi-actor collaborative process. Wu et al. summarize healthy community construction into six dimensions: healthy housing, healthy environment, healthy transportation, healthy facilities, healthy activities, and healthy society. Among them, healthy activities include walking, cycling, jogging, ball games, recreation, and cultural activities, while healthy society emphasizes neighborhood communication space, community participation, and residents' self-management (Wu et al., 2020). This indicates that community health and wellness spaces are not only design objects, but also governance objects. Only by forming an operational mechanism involving government, communities, property management, social organizations, medical institutions, and older residents can these spaces continuously play their role in health promotion.

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4. System Construction of Community Health and Wellness Spaces from the Perspective of Active Ageing

4.1 Spatial accessibility system: From single-point facilities to continuous networks

The construction of community health and wellness spaces should first establish a spatial accessibility system. The spatial accessibility system refers to connecting residential entrances, slow-mobility paths, resting nodes, fitness sites, activity squares, public green spaces, and community service facilities around older adults' daily living radius, forming a continuous, safe, and convenient activity network. For older adults, spatial accessibility depends not only on distance, but also on whether the path is continuous, whether the ground is flat, whether there are resting points, whether they need to cross motor vehicle flows, and whether there is clear signage and shade or shelter.

Specifically, communities can organize health and wellness space networks through the structure of "residential point—walking path—resting node—exercise space—communication space." Along major slow-mobility routes, resting facilities should be arranged according to older adults' physical strength, so that older adults can naturally shift between walking, exercising, and communicating. Zhou et al. propose that community spatial connectivity should be strengthened, and resting facilities should be set along major slow walking paths according to older adults' walking ability, so that scattered community spaces and slow walking paths can jointly form a complete walking system (Zhou et al., 2020). This view has direct reference value for the system construction of community health and wellness spaces.

The distance, size, and facility characteristics of neighborhood parks and open spaces affect residents' physical activity participation (Kaczynski et al., 2008), and the characteristics of open spaces are also closely related to older adults' walking activities (Sugiyama & Ward Thompson, 2008). Therefore, the spatial accessibility system should not only solve the problem of "whether older adults can reach the space," but also the problems of "whether they are willing to reach it" and "whether they are willing to stay after arriving." Community health and wellness spaces should improve older adults' daily willingness to use them through continuous walking paths, clear spatial identification, diverse activity nodes, and comfortable environmental atmosphere.

4.2 Exercise support system: From ordinary fitness to age-friendly exercise

The core function of community health and wellness spaces is to support older adults' physical activity and health promotion. Therefore, the exercise support system should be designed in a layered way according to older adults' physical function, health status, and exercise preferences. For active young-old adults, spaces can be provided for fitness exercises, square dancing, table tennis, tai chi, and jogging. For the oldest-old and older adults with chronic diseases, spaces can be provided for walking, stretching, balance training, flexibility training, and low-intensity rehabilitation exercise. For older adults with declining mobility, handrail walking paths, short-distance walking loops, and activity nodes where they can rest at any time should be provided.

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A study on older adults' satisfaction with outdoor fitness landscape environments shows that the construction of outdoor fitness landscape environments is of great significance to healthy ageing. Factors such as accessibility through walking and other traditional travel modes, landscape aesthetic quality, detailed design care, and the coordinated design of sound environment, landscape elements, and fitness activity characteristics affect older adults' satisfaction with fitness spaces (Ren et al., 2020). This indicates that the age-friendly exercise support system should not only focus on the number of pieces of equipment, but also on landscape quality, comfortable experience, and environmental attractiveness. Community health and wellness spaces should improve older adults' willingness to participate in exercise continuously through appropriate scale, diverse activity types, and a friendly environmental atmosphere.

4.3 Safety protection system: From physical accessibility to whole-process protection

The safety protection system is the foundation of age-friendly construction of community health and wellness spaces. Traditional age-friendly design often emphasizes barrier-free access. However, for community sports and physical activity spaces, barrier-free access alone is not enough; whole-process safety support is also required. First, the ground should be flat, anti-slip, and free from obvious height differences, avoiding damaged pavement, water accumulation, and obstacles. Second, handrails, backed seats, shade facilities, and night lighting should be provided in exercise spaces, walking paths, and resting nodes. Third, fitness equipment and rehabilitation facilities should be equipped with clear instructions, indicating applicable users, methods of use, and risk reminders. Finally, emergency call systems, community patrols, and facility maintenance mechanisms should be established to reduce the risks of sudden health problems and unsafe spatial use among older adults.

Wang et al. (2020) show that the construction of age-friendly residential communities should pay attention to moderate age-friendly design, spatial quality, and sustainability, and should enhance older adults' independent living ability through appropriate environmental support. Zheng et al. (2021) also point out that old community micro-renewal should pay attention to safety, identifiability, and sociability. Therefore, safety protection in community health and wellness spaces should not be limited to individual facilities, but should run through the whole process of "arrival—entry—exercise—stay—departure."

4.4 Leisure interaction system: From physical exercise to social participation

Active ageing emphasizes older adults' social participation. Therefore, community health and wellness spaces should provide leisure interaction and community integration functions in addition to physical exercise. Older adults' sports and physical activities are often group-based and social. Square dancing, tai chi, fitness exercises, chess and card games, walking, and chatting are not only physical activities, but also processes of forming social connections. If community health and wellness spaces provide only exercise equipment but lack communication spaces, it will be difficult for them to play the participation function required by active ageing.

The leisure interaction system can be realized through three types of space. The first is staying space before and after exercise, such as seats, corridors, tree shade, boundary spaces, and small enclosed nodes. The second is group activity space, such as squares, ground-floor activity areas, community activity rooms, and flexible activity sites. The third is participation organization space, such as community sports associations,

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volunteer service points, activity notice boards, and resident discussion spaces. Through these spaces, older adults can shift from being "space users" to "activity participants" and "community co-builders."

4.5 Collaborative governance system: From one-time construction to continuous operation

For community health and wellness spaces to function continuously, a collaborative governance system must be established. This system includes demand collection, space construction, facility maintenance, activity organization, health guidance, feedback evaluation, and continuous renewal. Government and subdistrict offices are responsible for policy support and resource coordination; communities are responsible for daily organization and resident communication; property management is responsible for facility maintenance and safety patrols; social organizations and sports institutions are responsible for activity operation and professional guidance; community health service institutions provide health consultation and risk reminders; and older residents participate in demand expression, activity planning, and spatial evaluation.

Hu and Huang (2021) point out that the creation of age-friendly healthy communities needs to improve the content system, build a more balanced relationship among multiple actors, and establish a hierarchical collaborative construction mechanism (Hu & Huang, 2021). Wang and Ren also emphasize that age-friendly community construction should improve bottom-up decision-making participation platforms and explore multi-actor co-construction mechanisms (Wang & Ren, 2015). Age-friendly community construction itself is comprehensive and needs to include the physical environment, social environment, service system, and policy support within the same governance framework (Menec et al., 2011). At the same time, age-friendly city construction should avoid replacing social participation with simple facility provision, and should strengthen older adults' social integration through community governance and public participation mechanisms (Buffel et al., 2012). Therefore, the construction of community health and wellness spaces should not be a one-time project, but should form a closed-loop mechanism of "construction—use—feedback—maintenance—renewal."

5. Age-Friendly Construction Pathways for Community Health and Wellness Spaces

5.1 From single-point facility configuration to continuous spatial networks

The construction of community health and wellness spaces should first change the fragmented way of thinking. Traditional age-friendly transformation of communities often appears as adding several sets of fitness equipment, installing several seats, or repairing local roads. However, this approach cannot form systematic support. From the perspective of active ageing, community health and wellness spaces should be planned around older adults' daily living routes, connecting walking, resting, exercising, communication, and health services. Especially in old communities, micro-renewal should be used to integrate corner spaces, spaces between buildings, public green spaces, and ground-floor activity spaces, forming a health and wellness network that is multi-point distributed, walkable, and functionally complementary.

Existing studies show that older adults' physical activity and walking behavior are influenced by multiple

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built environment factors, including destination accessibility, walking path continuity, traffic safety, open space quality, and public facility configuration (Van Cauwenberg et al., 2011; Barnett et al., 2017). Therefore, the construction of community health and wellness spaces should not take a single fitness point as the only object. Instead, community roads, public green spaces, activity sites, resting nodes, and service facilities should be organized as an integrated network.

5.2 From ordinary fitness spaces to age-friendly exercise-support spaces

Community health and wellness spaces cannot be equated with ordinary fitness spaces. Ordinary fitness facilities often assume the general adult as the default user, while older adults have specific exercise abilities, physical risks, and behavioral preferences. Therefore, communities should provide differentiated exercise spaces according to older adults' age, health status, and exercise purposes. For healthy older adults, richer fitness and social activity spaces should be provided. For older adults with chronic diseases, low-intensity, monitorable, and restable rehabilitation exercise spaces should be provided. For the oldest-old, light exercise spaces that are short-distance, highly safe, and allow resting at any time should be provided. At the same time, exercise instructions, intensity reminders, and activity organization should be used to guide older adults to exercise scientifically.

5.3 From physical barrier-free design to whole-process safety protection

Age-friendly construction should not remain only at the level of ramps, handrails, and other barrier-free facilities. It should form whole-process safety protection. Community health and wellness spaces should pay attention to the complete movement chain from the older adult's home to the activity site, including road passage, crossing safety, spatial identification, equipment use, activity stay, and emergency rescue. Especially at night, in rain or snow, or in high-temperature conditions, lighting, shelter, and alternative indoor activity spaces should be provided to ensure the continuity and safety of older adults' activities.

5.4 From physical exercise to the integration of exercise, leisure, and communication

From the perspective of active ageing, community health and wellness spaces should not emphasize physical exercise alone, but should also pay attention to leisure interaction and social participation. Spatial design should set up nodes around exercise areas where older adults can stay, watch, and communicate, so that they can gain social opportunities beyond exercise. Communities can also turn exercise spaces into places where community relationships are generated through interest groups, sports associations, volunteer services, and festival activities. In this way, community health and wellness spaces can not only improve physical health, but also relieve loneliness, enhance belonging, and improve life satisfaction.

5.5 From one-time construction to continuous multi-actor operation

The effectiveness of community health and wellness space construction does not depend on one-time transformation, but on continuous operation. Communities should establish daily maintenance systems, regularly inspect facility safety, ground conditions, lighting equipment, and activity order. At the same time, resident feedback mechanisms should be established to understand older adults' use experiences and changing needs in a timely manner. For spaces with low use rates, the causes should be analyzed and functions should be

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adjusted. For popular activities, organization frequency and resource support should be increased. Through multi-actor collaborative governance, community health and wellness spaces can be transformed from built spaces into continuously operating health support systems.

6. Conclusion

Against the background of active ageing, the age-friendly construction of community health and wellness spaces has important practical significance. This study defines community health and wellness spaces as community sports and physical activity spaces with older adults' physical activity, rehabilitation exercise, health promotion, leisure communication, and social participation as their core functions. It emphasizes that their essence is not a single fitness facility, but a multifunctional public space system that supports older adults' health, participation, and safety.

At present, community health and wellness spaces still face problems such as insufficient spatial supply, weak accessibility, single exercise functions, weak safety details, insufficient leisure interaction, and lack of operation and management. In response to these problems, this study proposes, from the perspective of active ageing, a construction framework composed of a spatial accessibility system, exercise support system, safety protection system, leisure interaction system, and collaborative governance system. It further proposes five construction pathways: shifting from single-point facility configuration to continuous spatial networks; from ordinary fitness spaces to age-friendly exercise-support spaces; from physical barrier-free design to whole-process safety protection; from physical exercise to the integration of exercise, leisure, and communication; and from one-time construction to continuous multi-actor operation.

Overall, the construction of community health and wellness spaces should shift toward a systematic way of thinking based on the coordination of "space—activity—health—participation—governance." Future community renewal and age-friendly community construction should pay more attention to older adults' real living radius, changes in physical function, and social participation needs. Through age-friendly spatial design, scientific exercise support, leisure interaction creation, and collaborative governance mechanisms, community health and wellness spaces can become an important community-level practice carrier for active ageing.

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