

A Study on Improving Leisure and Elderly Care Services for Disabled Seniors in Dalian from the Perspective of Urban Renewal

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Abstract: Under the dual background of deep population aging and urban renewal and quality improvement, the leisure pension needs of disabled elderly groups, as special vulnerable groups in pension services, have long been neglected. Urban renewal is not only the transformation and upgrading of urban space and facility environment, but also the reconstruction of the public service system and people's livelihood guarantee mechanism, which brings an important opportunity for the quality improvement of leisure pension services for the disabled elderly. Taking Dalian as the research object, based on the theories of urban renewal, active aging, and barrier-free environment construction, this paper systematically explores the current situation of leisure pension services for the disabled elderly in Dalian through field investigation, questionnaire survey, and interview analysis. The study finds that the current leisure pension for the disabled elderly in Dalian has problems such as insufficient spatial adaptability, imperfect barrier-free facilities, single leisure service content, unbalanced supply and demand matching, and an imperfect service guarantee mechanism. Combined with Dalian's urban construction practices such as old community renovation, coastal urban renewal and community quality improvement, targeted optimization strategies are proposed from five dimensions: spatial environment, service system, operation mechanism, policy guarantee, and intelligent empowerment, so as to make up for the shortcomings of pension services for the disabled elderly, build a leisure pension service system that adapts to the rhythm of urban renewal and meets the physical and mental needs of the disabled elderly, help build an elderly-friendly and barrier-free livable city in Dalian, and provide reference for the optimization of pension services for the disabled elderly in similar coastal cities.

Keywords: Urban renewal; Disabled elderly; Leisure pension; Pension service optimization

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1. Introduction

1.1. Research background

The aging of our population is getting more serious, and the number of very old, disabled, and impaired

elderly people is growing every year. Elderly care has shifted from just meeting basic living needs to covering a variety of needs like leisure, mental and physical wellness, and social participation ^[1]. Disabled elderly people, because of their limited mobility and physical functions, have much higher demands for accessible leisure spaces, barrier-free facilities, and specialized leisure services than ordinary elderly people. They are a group that needs to be given special attention in the elderly care system.

At the same time, China's urban renewal efforts are moving forward across the board. Renovating old neighborhoods, improving public spaces, upgrading infrastructure, and reshaping community functions have become core tasks for city development. Urban renewal is no longer just about fixing buildings and roads—it is also about improving services for people, public facilities, and accessibility for seniors, providing policy support and spaces to tackle the challenges in elderly care for people with disabilities, and filling gaps in specialized elderly services.

As a key coastal city in Northeast China facing an aging population, Dalian has one of the highest aging rates in the province. It has a high proportion of old urban areas and a concentrated elderly population, with a relatively large base of elderly people with disabilities. Currently, in Dalian's urban renewal process, most renovation projects focus on improving the city's appearance, while dedicated leisure and care facilities, accessible recreational spaces, and personalized wellness services for elderly people with disabilities lag behind. There is a common problem of "focusing on construction, neglecting adaptation; focusing on general benefits, neglecting special needs," making it hard to meet the leisure and care needs of disabled seniors effectively. Against this backdrop, using the opportunity of urban renewal to enhance leisure and care services for disabled elderly people has become an important topic for Dalian in improving its eldercare system and making the city more livable.

1.2. Significance of the study

1.2.1. Theoretical significance

Most existing research on elderly care focuses on the general elderly population, the integration of medical care, and home-based care. There is relatively little research on leisure and elderly care specifically for elderly people with disabilities, and few studies take a systematic approach from the perspective of urban renewal. This article combines the spatial restructuring of urban renewal, the idea of upgrading public services, and the leisure and elderly care needs of elderly people with disabilities. It enriches the theoretical system for research on elderly care services for special older groups, broadens the study of how urban renewal empowers people's livelihoods, offers a new theoretical perspective for barrier-free and refined elderly care services, and provides a theoretical reference for differentiated elderly care service research in northeastern coastal cities.

This article is based on the actual situation of urban renewal in Dalian and the current state of elderly care for disabled seniors. It carefully identifies gaps in services and real pain points, and proposes optimization plans that match Dalian's local characteristics, are feasible, and can be promoted. These plans can effectively improve the leisure and elderly care environment for disabled seniors in Dalian, enhance accessible leisure facilities, enrich professional leisure and wellness services, and boost the quality of life and happiness for disabled seniors. At the same time, it can provide practical guidance for renovating old residential areas for the elderly, updating public spaces for accessibility, and improving community elderly care services in Dalian, as well as offer practical reference for other aging cities in China to upgrade care

services for special groups.

1.3. Current research status at home and abroad

1.3.1. Current status of research abroad

Developed countries overseas entered the aging phase earlier, forming a relatively mature research system covering barrier-free elderly care and leisure services for disabled seniors. In terms of integrating urban renewal and age-friendly services, European and American countries have proposed concepts of “age-friendly cities” and “barrier-free community renewal”^[2]. They stress that urban spatial renovation should prioritize adapting to the travel, leisure, and social needs of incapacitated and disabled elderly^[3]. By constructing continuous tactile paving, accessible ramps, rest stations, and age-friendly leisure venues, all-age inclusive urban public spaces are built.

In the field of leisure pension services, foreign countries prioritize professional and personalized service supply. Customized rehabilitation leisure, psychological counseling, cultural and social entertainment, and rehabilitation companionship services are designed for elderly people with different types and degrees of disabilities. Meanwhile, embedded leisure pension service platforms are built via community renewal to synchronize spatial renovation and service upgrading. Furthermore, sound policy guarantee and market-oriented operation mechanisms have been established. A model combining government bottom-line support, social organization participation, and market supplementation ensures sustainable supply of leisure pension services for disabled elderly.

1.3.2. Current state of domestic research

Research on urban renewal and elderly care services in China has been growing richer, with most studies focusing on adapting old residential areas for seniors, optimizing community spaces, and upgrading inclusive elderly services^[4]. Some scholars have looked into building accessible facilities and improving public spaces for the elderly in the context of urban renewal, suggesting that micro-renovations and minor updates can enhance community elderly support. In research on disabled elderly care, existing studies mostly focus on basic services like medical and nursing integration, rehabilitation care, and daily support, while there is less research on leisure-oriented elderly care. Plus, many studies have a narrow perspective or lack regional specificity. As for Dalian, related research tends to focus on overall elderly care system development and coastal elderly industries, but it has not yet systematically analyzed the supply-demand conflicts and optimization paths for leisure care for disabled seniors in the context of urban renewal, leaving room for further study^[5].

1.3.3. Research review

Existing research at home and abroad provides a solid theoretical foundation and practical reference for this article, but there are still some shortcomings: first, there is insufficient study on integrating urban renewal with elderly care services for special groups, with most focusing on spatial renovation and overlooking the simultaneous reconstruction of leisure service systems; second, there hasn't been enough in-depth exploration of the differentiated and personalized leisure and elderly care needs of elderly people with disabilities, leading to a lack of precision in service supply; third, there is a lack of specialized research on Dalian's coastal city and densely populated old urban area characteristics, with existing strategies being too general

and hard to implement. This article addresses the gaps in existing research, focuses on Dalian's local features, and aims to accurately meet the leisure and elderly care needs of elderly people with disabilities, achieving an all-around optimization of spatial, service, and mechanism updates.

1.4. Research content and methods

1.4.1. Research content

This paper consists of six parts: Part One is the introduction, elaborating the research background, significance, domestic and overseas research status, research content, methodologies, and innovations. Part Two defines core concepts and sorts out foundational theories. Part Three investigates the status quo of urban renewal and leisure pension services for disabled elderly in Dalian, analyzing local urban renewal progress, demographic characteristics of disabled seniors, and the supply of leisure pension services. Part Four identifies core existing problems and analyzes their root causes from policy, spatial, service, operational, and cognitive dimensions. Part Five proposes targeted optimization strategies covering spatial transformation, service systems, operational mechanisms, policy guarantees, and smart empowerment from the urban renewal perspective. Part Six presents conclusions and prospects, summarizing research findings, acknowledging limitations and outlining directions for future research.

1.4.2. Research methods

(1) Literature Research Method: Domestic and foreign literature, policy documents, and industrial reports related to urban renewal, pension services for disabled elderly, leisure pension services, and barrier-free environment construction are reviewed to consolidate the theoretical foundation and draw on existing research outcomes and practical experience. (2) Questionnaire Survey Method: Questionnaires are distributed to disabled elderly residents, community staff, and pension service practitioners in sub-districts and communities with concentrated old residential areas and large elderly populations in Zhongshan, Xigang, Shahekou, and Ganjingzi Districts of Dalian, collecting core data on leisure pension demands, service satisfaction, and prevailing pain points. (3) In-depth Interview Method: Interviews are conducted with staff from Dalian's Civil Affairs and Housing & Urban-Rural Development Bureaus, community pension directors, disabled elderly and their family members to obtain frontline insights into age-friendly barrier-free renovation planning in urban renewal, operational difficulties of leisure pension services, and genuine service demands. (4) Case Analysis Method: Successful cases of optimizing pension services for disabled elderly during urban renewal in Shanghai, Hangzhou, Qingdao, and other domestic cities are studied to summarize replicable experience and adapt it to Dalian's local conditions.

1.5. Research innovations

- (1) Perspective Innovation: Breaking the constraints of traditional pension service research, this paper adopts urban renewal as the core perspective, deeply integrating physical urban spatial renewal with the reconstruction of leisure pension service systems for disabled elderly. It focuses on refined elderly care services for special groups, filling gaps in relevant segmented research.
- (2) Regional Innovation: Based on Dalian's unique regional characteristics as a coastal city with dense old urban areas and a high aging rate, this paper analyzes exclusive local problems concerning leisure pension services for disabled elderly, and puts forward localized, implementable optimization strategies

matching Dalian's urban renewal rhythm, avoiding the adaptation drawbacks of universal schemes.

- (3) Content Innovation: Distinct from research focusing on basic elderly care security, this study targets the segmented field of leisure pension, highlighting high-level demands of disabled elderly including cultural and spiritual entertainment, rehabilitation leisure and social participation. It constructs an all-round optimization system featuring "barrier-free spaces + professional services + long-term mechanisms."

2. Core concepts and theoretical foundations

2.1. Definition of core concepts

2.1.1. Urban renewal

Urban renewal refers to systematic urban construction projects that renovate and upgrade outdated urban areas, inefficient spaces and backward facilities, reconstruct functions, improve ecology and perfect public services, covering old community renovation, public space remediation, infrastructure upgrading, community function optimization and human settlement improvement. The core connotation of urban renewal in the new era has shifted from single physical spatial transformation to comprehensive renewal integrating "space upgrading, people's livelihood improvement, service advancement and governance optimization" [6]. Centered on human needs, it prioritizes the demands of special groups, promotes refined, inclusive, and livable urban development, and provides vital support for equalized public services and protection of vulnerable groups.

2.1.2. Disabled elderly

The disabled elderly defined in this paper refer to seniors aged 60 and above whose mobility, perception, and activity capacity are restricted due to physical, visual, or hearing disabilities, advanced-age incapacitation, or chronic illness-induced disability. This group is characterized by weak physical functions, limited mobility, narrow activity ranges, prominent spiritual demands, and heavy reliance on external services and barrier-free facilities. They impose far higher requirements on the safety, convenience, professionalism, and adaptability of leisure pension services than ordinary seniors, making them a key vulnerable group in need of priority protection within the pension service system.

2.1.3. Leisure pension services

Leisure pension services are high-level elderly care services differentiated from basic daily care and medical treatment. Centered on satisfying seniors' demands for cultural entertainment, rehabilitation leisure, social interaction and physical and mental well-being, they cover provision of age-friendly leisure venues, rehabilitation leisure activities, cultural and social services, psychological companionship, outdoor rehabilitation and barrier-free leisure supporting facilities. Leisure pension services tailored for disabled elderly further emphasize barrier-free adaptation, low intensity, high safety, professionalism and personalization, balancing physical rehabilitation and spiritual comfort.

2.2. Theoretical foundations

2.2.1. Active aging theory

Abandoning the passive security concept of traditional elderly care, the active aging theory centers on three core goals for seniors: health, participation, and well-being. It advocates creating suitable living

environments and social participation opportunities for the elderly, safeguarding their rights to leisure and social value realization. This theory forms the core value orientation of this research: disabled elderly are not mere passive recipients of elderly care, and they also require professional leisure pension services to achieve physical and mental rehabilitation and social engagement. Urban renewal must provide spatial and service support for disabled seniors to pursue active aging and enjoy their later lives.

2.2.2. Barrier-free environment construction theory

The core of the barrier-free environment construction theory lies in eliminating physical obstacles and service barriers through spatial renovation, facility matching, and service optimization, ensuring equal rights for disabled groups, seniors, children, and other vulnerable groups to travel, engage in activities, and access public services. This theory delivers the core basis for renovating leisure spaces, completing barrier-free supporting facilities, and optimizing service adaptation for disabled elderly during urban renewal, serving as a critical theoretical support to break spatial barriers restricting their leisure activities.

2.2.3. Equalization of public services theory

The equalization of public services theory stresses that public services must balance inclusiveness and particularity, guaranteeing equal access to public services for all groups and prioritizing vulnerable populations. As an important carrier for upgrading public services, urban renewal should abandon one-size-fits-all universal service supply models, optimize leisure pension services according to the special demands of disabled elderly, narrow the service gap between special groups and ordinary seniors, and realize refined, equalized, and inclusive development of elderly care services.

3. Status quo of urban renewal and leisure pension services for disabled elderly in Dalian

3.1. Overview of urban renewal development in Dalian

3.1.1. Overall progress of urban renewal

As a core coastal city in Northeast China, Dalian features extensive old urban areas constructed years ago, plagued by aging infrastructure, insufficient public spaces, and a lack of age-friendly supporting facilities. In recent years, Dalian has continuously advanced urban renewal initiatives, focusing on renovation of old residential communities, street environmental improvement, upgrading of community public spaces, renewal of coastal leisure belts, and improvement of barrier-free infrastructure, targeting human settlement optimization and public service upgrading. The renewal scope covers core old urban districts including Zhongshan, Xigang, and Shahekou Districts, and gradually extends to all urban communities. The overall development features micro-renovation, refinement, and people's livelihood orientation, laying a solid foundation for quality improvement of elderly care services and barrier-free environment construction.

3.1.2. Age-friendly and barrier-free renewal initiatives

Amid urban renewal, Dalian has gradually attached importance to age-friendly renovation. Basic age-friendly projects have been carried out in some old communities, including installing ordinary leisure seats, fitness equipment, and senior activity centers, leveling roads, and adding corridor handrails. Meanwhile, barrier-free ramps and tactile paving have been completed on major urban roads during public space renewal,

and rest areas for seniors have been added in urban parks and coastal leisure belts ^[7]. Nevertheless, most existing renewal measures target the general public; exclusive barrier-free leisure supporting facilities and professional leisure service renovations for disabled elderly account for an extremely small proportion, lacking refined and differentiated adaptation ^[8].

3.2. Basic characteristics of disabled elderly in Dalian

Combining Dalian's elderly care statistics and survey data, the disabled elderly group in Dalian presents four major characteristics: First, the population continues to grow, with rising numbers of seniors disabled by advanced age, chronic diseases, or congenital impairments, and higher concentrations of disabled elderly in old urban areas. Second, demands vary significantly: seniors with physical, visual, or hearing disabilities hold vastly different requirements for leisure modes, spaces, and services, making uniform services poorly adapted. Third, activity mobility is highly restricted: most disabled elderly only move around their neighborhoods, relying on nearby leisure spaces and on-site or community leisure services, with minimal demand for distant outdoor rehabilitation. Fourth, spiritual demands are prominent: disabled elderly face limited social channels and intense loneliness, with far greater demand for cultural leisure, psychological companionship, and group activities than material security ^[9].

3.3. Supply status of leisure pension services for disabled elderly in Dalian

3.3.1. Supply of spatial facilities

At present, leisure spaces for seniors in Dalian are mainly distributed in urban parks, community squares, and pension service centers. While ordinary age-friendly leisure facilities are widely covered, exclusive barrier-free leisure facilities for disabled elderly are severely insufficient. Most leisure venues in old communities lack accessible ramps and wheelchair parking areas; broken and occupied tactile paving is a common problem. Leisure seats feature inappropriate heights and hardness without anti-slip, anti-collision, and lift-assist designs adapted to disabled seniors. Most community senior activity centers and leisure rooms have not undergone barrier-free renovations, preventing disabled elderly from independent access. Dalian's coastal leisure resources fail to accommodate disabled seniors, with discontinuous accessible paths along coastal walkways and a shortage of exclusive rest, sightseeing, and rehabilitation leisure zones.

3.3.2. Supply of service content

Current pension services in Dalian focus on basic living care, medical nursing, and rehabilitation assistance, while leisure pension services are underdeveloped and highly homogeneous. Leisure services available for disabled elderly are limited to basic indoor chatting and simple cultural activities, lacking professional rehabilitation leisure, barrier-free outdoor rehabilitation, customized cultural entertainment, and psychological leisure counseling. No differentiated leisure services are designed for seniors with different disability types and physical conditions: physically disabled seniors lack low-intensity sports leisure services, while visually and hearing-impaired seniors have no matching cultural and social activities. Community leisure activities are held infrequently with monotonous formats, resulting in extremely low participation among disabled elderly. Furthermore, service supply relies on passive distribution without regular demand research and dynamic matching mechanisms, leading to severe supply-demand mismatch.

3.3.3. Service providers and operation status

Leisure pension services for disabled elderly in Dalian are primarily provided by the government and communities, with minimal participation from social organizations and market-oriented institutions. The government takes charge of infrastructure construction and inclusive elderly care bottom-line support, while communities organize daily leisure activities. However, communities lack special funds, professional staff, and operational capacity. Market-oriented pension institutions mostly focus on high-end rehabilitation and medical nursing, rarely offering exclusive leisure services for disabled elderly. Social organizations participate in fragmented, sporadic projects without forming regular, professional operation models for leisure services, resulting in poor long-term service sustainability.

3.3.4. Policy guarantee status

Dalian has issued policies covering age-friendly renovation of old communities, quality improvement of pension services and barrier-free environment construction, yet these policies consist of inclusive, general provisions. Special policies targeting leisure pension services for disabled elderly remain blank, with no dedicated standards for facility renovation, service specifications, funding subsidies or talent support. Urban renewal planning fails to incorporate mandatory construction indicators for barrier-free leisure spaces and services for disabled elderly, leading to long-term neglect of special group demands during renovation projects.

4. Existing problems and root causes of leisure pension services for disabled elderly in Dalian

4.1. Core existing problems

4.1.1. Insufficient adaptation to urban renewal and absence of integrated barrier-free leisure space system

Dalian's urban renewal follows a model of "prioritizing appearance over adaptation, universal benefits over special groups." Renovations of old communities, public spaces and coastal leisure belts fail to fully consider the demands of disabled elderly. First, barrier-free spaces are fragmented: tactile paving, ramps and rest facilities are discontinuous with breaks and obstacles, failing to form closed-loop accessible leisure routes. Second, exclusive leisure spaces are scarce, with no dedicated barrier-free leisure venues, rehabilitation zones or fully adapted indoor activity rooms for disabled seniors ^[10]. Third, spaces lack safety guarantees: leisure venues are missing anti-slip flooring, anti-collision protection, suitable lighting and accessible signage, endangering disabled elderly during leisure activities. Fourth, coastal characteristic resources are underutilized: Dalian's high-quality coastal rehabilitation resources have not been converted into leisure pension resources for disabled seniors, with critical shortages of matching accessible coastal supporting facilities.

4.1.2. Monotonous leisure service supply and low precision of supply-demand matching

Leisure pension service supply suffers from severe homogenization and extensive operation, unable to meet the differentiated and personalized demands of disabled elderly. Service content is limited to simple cultural activities, lacking diversified options including rehabilitation leisure, physical and mental rehabilitation therapy, psychological leisure, and barrier-free outdoor experiences. One-size-fits-all service models fail

to customize offerings for seniors with physical, visual, or hearing disabilities, resulting in insufficient effective supply. Most community leisure activities carry high participation thresholds and poor adaptability, leaving disabled elderly with low willingness and rates of participation ^[11]. In addition, services are passively delivered without demand research and dynamic matching mechanisms, perpetuating supply-demand dislocation.

4.1.3. Imperfect service operation system and low professionalism

Leisure pension services for disabled elderly in Dalian lack professional, regular operation systems. First, there is a severe shortage of professional talent: community and pension service staff receive no specialized training on leisure services and barrier-free care for disabled elderly, lacking the capacity to deliver adapted services. Second, operation models are single, over-reliant on government and community public welfare supply with insufficient market and social participation, leading to weak service vitality and sustainability. Third, service management is loose, without standardized procedures, specifications, or assessment mechanisms, resulting in uneven service quality. Fourth, smart empowerment lags behind: smart community and elderly care platforms are not leveraged to build systems for reservation, adaptation, and supervision of leisure services for disabled elderly, reducing service efficiency.

4.1.4. Incomplete policy guarantee system and lack of integrated urban renewal mechanisms

There is a vacuum of special institutional arrangements, and mechanisms integrating urban renewal and leisure pension services for disabled elderly remain flawed. First, dedicated policy support is absent, with no targeted regulations covering facility renovation, service supply, talent training, and funding subsidies for leisure pension services for disabled seniors. Second, urban renewal planning excludes mandatory indicators for special elderly care services, with no rigid construction standards for barrier-free leisure facilities for disabled elderly, rendering renovation projects arbitrary. Third, multi-party coordination mechanisms are lacking: housing, civil affairs, disabled persons' federations and sub-district communities have scattered responsibilities, failing to form linked renewal and collaborative service workflows. Fourth, funding guarantees are inadequate: no special fiscal allocations are earmarked for leisure pension services for disabled elderly, creating large funding gaps for renovation and operation.

4.1.5. Insufficient social awareness and weak participation atmosphere

Society generally overlooks the leisure demands of disabled elderly. The public widely holds the misconception that elderly care only requires basic living and medical security, ignoring the importance of rehabilitation, leisure, and spiritual comfort. Communities, social organizations, and volunteers launch few volunteer leisure activities targeting disabled seniors, creating a weak social participation atmosphere ^[12]. Meanwhile, disabled elderly often suffer from inferiority and social withdrawal, with low willingness to participate in leisure activities or voice service demands, further exacerbating supply-demand imbalance in leisure pension services.

4.2. Root cause analysis of problems

4.2.1. Lagging planning concepts and insufficient refined human-centered thinking

Dalian's urban renewal has long prioritized spatial environmental improvement and urban appearance regulation, with planning concepts focused on universal, mass construction. Refined, differentiated livelihood

thinking is absent, and the special demands of vulnerable groups such as disabled elderly are not integrated into renewal planning systems. During renovation of old communities and public spaces, basic mass demands are prioritized over barrier-free adaptation and personalized leisure needs of special groups, disconnecting spatial transformation from the pension demands of disabled elderly.

4.2.2. Absence of demand identification mechanisms and biased service supply orientation

Relevant government departments and communities lack regular mechanisms to research, collect, and provide feedback on leisure demands of disabled elderly, failing to accurately grasp leisure preferences, service requirements, and spatial expectations of seniors with different disability types and age brackets. Service supply follows a top-down model driven by policy requirements and routine administrative work rather than user demands, resulting in facilities and services mismatched with the actual needs of disabled elderly and long-standing supply-demand dislocation.

4.2.3. Inadequate coordination of multiple stakeholders and immature socialized operation

Leisure pension services for disabled elderly rely excessively on government bottom-line support, with blocked participation channels and missing incentive mechanisms for market players, social organizations, and volunteers. Government-led models face limited resource reserves, insufficient innovation, and weak vitality. The elderly care market prioritizes high-end services, with low profit margins discouraging market participation in inclusive special leisure services. Social organizations are underdeveloped and lack professional capacity to undertake refined leisure pension services for disabled seniors, failing to form a multi-stakeholder co-governance service system.

4.2.4. Vacant special institutions and funding guarantees

Local policy systems pay insufficient attention to leisure pension services for disabled elderly, lacking targeted institutional norms, construction standards and supportive policies, leaving a gap in institutional frameworks integrating urban renewal and special elderly care services. Meanwhile, fiscal funds are primarily allocated to basic elderly care security and general age-friendly renovation, with no special funding for exclusive leisure facility upgrades and professional service operations for disabled elderly. Funding shortages restrict quality improvement of services and spatial upgrading.

4.2.5. Imperfect professional talent cultivation system

Dalian has not established a specialized talent cultivation system for pension services targeting disabled elderly. Local universities and vocational colleges lag behind in training relevant professionals, and the industry lacks systematic pre-job and on-the-job training systems. Existing elderly care staff generally lack expertise in barrier-free services, psychological counseling for disabled seniors, and rehabilitation leisure guidance, making talent shortages a core bottleneck restricting service quality improvement.

5. Optimization strategies for leisure pension services for disabled elderly in Dalian from the urban renewal perspective

5.1. Spatial renewal optimization: Construct a barrier-free adaptive leisure pension space system

5.1.1. Carry out micro-renovation of old communities and complete citywide barrier-free leisure supporting facilities

Leveraging Dalian's urban renewal projects for old communities, launch special renovations of barrier-free leisure spaces for disabled elderly. Connect community accessible leisure routes by repairing and standardizing tactile paving, clearing obstructions on tactile paths, and installing standardized accessible ramps, handrails and anti-slip flooring at community entrances, leisure venues and activity rooms. Customize leisure facilities adapted to disabled elderly, including height-adjustable seats with lift-assist functions, anti-collision protective equipment, optimized lighting and accessible signage. Convert marginal community spaces and micro-lots into "micro age-friendly and disability-adapted leisure zones" equipped with compact rehabilitation fitness equipment and accessible rest facilities, enabling safe, nearby leisure activities for disabled seniors.

5.1.2. Optimize public leisure spaces and activate coastal characteristic pension resources

Upgrade urban parks, squares and coastal leisure belts to build professional, barrier-free rehabilitation and leisure spaces for seniors. Designate exclusive rehabilitation and leisure zones for disabled elderly in public recreational areas, furnished with accessible viewing platforms, rehabilitation fitness equipment and rest stations. Optimize accessible designs along coastal walkways to eliminate breaks in accessible routes, creating coastal rehabilitation leisure routes tailored to disabled seniors. Capitalize on Dalian's coastal ecological advantages to develop low-intensity, high-safety coastal leisure pension scenarios. Enforce unified construction standards for barrier-free facilities in public spaces, and incorporate disability-adapted age-friendly leisure supporting facilities as mandatory acceptance indicators for urban renewal to guarantee implementation of spatial renovations.

5.1.3. Upgrade community pension service venues and build exclusive leisure service spaces

Fully renovate community pension service centers and senior activity rooms for barrier-free access: widen passageways, redesign entrances for wheelchair mobility, and install auxiliary equipment for visually and hearing-impaired seniors. Divide venues into rehabilitation leisure zones, cultural entertainment zones, psychological rest zones, and social interaction zones to target leisure demands of seniors with different disabilities. Equip venues with professional rehabilitation fitness equipment, accessible cultural and entertainment supplies, audiobooks and hearing aids, forming professional, diversified community leisure pension hubs for disabled elderly.

5.2. Service system Optimization: Build a precise, differentiated leisure pension service system

5.2.1. Establish a precise demand identification mechanism

Build a regular research system for leisure demands of disabled elderly, jointly operated by communities, disabled persons' federations and civil affairs departments. Conduct comprehensive surveys covering disability types, physical conditions, leisure preferences and service demands of local disabled seniors,

creating one-person-one-file demand databases. Sort leisure service demands by categories of physical, visual and hearing disabilities, and dynamically update demand and service lists to realize precise matching and real-time adaptation of service supply, thoroughly resolving supply-demand dislocation.

5.2.2. Diversify leisure pension service offerings

Construct a four-in-one service system integrating rehabilitation leisure, cultural entertainment leisure, psychological leisure, and social leisure, matching differentiated demands of disabled elderly. For rehabilitation leisure: launch low-intensity rehabilitation exercises, physical therapy leisure, and limb function training services. For cultural entertainment leisure: design audio reading and auditory entertainment for visually impaired seniors, handicrafts, painting and visual cultural activities for hearing-impaired seniors, and seated rehabilitation and light leisure activities for physically disabled seniors. For psychological leisure: deliver regular psychological counseling, emotional companionship, and spiritual comfort services to alleviate loneliness and anxiety among disabled elderly. For social leisure: organize small-scale, highly inclusive group activities and peer mutual support programs to expand social channels for disabled seniors. Meanwhile, develop characteristic coastal leisure services such as accessible coastal sightseeing and ecological rehabilitation leveraging Dalian's coastal advantages.

5.2.3. Implement tiered and classified precise service modes

Classify disabled elderly into mild, moderate, and severe tiers based on disability level, physical condition, and self-care capacity, and deliver tiered services accordingly. Mildly disabled seniors are prioritized with outdoor leisure, social cultural and rehabilitation experience services; moderately disabled seniors receive community indoor leisure, rehabilitation training and companion entertainment services; severely disabled seniors are provided with home-based leisure companionship, in-home rehabilitation leisure and one-on-one psychological counseling services, realizing full coverage of refined, personalized services.

5.3. Operation mechanism optimization: Build a long-term operation system with multi-stakeholder coordination

5.3.1. Clarify rights and responsibilities of multiple stakeholders and build a coordinated operation platform

Establish a multi-stakeholder collaborative operation mechanism featuring “government leadership, community primary responsibility, market supplementation, social organization participation and volunteer support.” The government undertakes policy formulation, funding guarantee, standard setting and supervision assessment; communities are responsible for demand surveys, activity organization, venue operation and daily services; market-oriented pension and cultural tourism institutions are encouraged to settle in communities and provide paid professional personalized leisure services to supplement public welfare service gaps; local pension and disability support social organizations are supported to undertake regular leisure service projects; special volunteer teams are formed to deliver free companionship and activity assistance for disabled elderly.

5.3.2. Improve talent cultivation mechanisms and boost professional service standards

Build a special talent cultivation system for leisure pension services targeting disabled elderly. Cooperate with local universities, vocational colleges and pension industry institutions to deliver specialized training

covering barrier-free services, psychological counseling for disabled seniors, rehabilitation leisure guidance and differentiated service skills. Mandate regular pre-job training and on-the-job rotation training for community staff, pension service practitioners and volunteers, with qualification certification required for practice. Establish talent incentive mechanisms including special subsidies and merit awards to boost practitioner motivation and professionalism, fostering a professional service workforce.

5.3.3. Advance smart empowerment to improve service operation efficiency

Build a smart leisure pension service system for disabled elderly based on Dalian's smart community and smart elderly care platforms, integrating demand surveys, service reservations, activity registration, facility inquiries, home-based service scheduling and supervision evaluation functions. Equip disabled elderly with intelligent auxiliary devices linked to barrier-free leisure spaces and service venues to deliver intelligently adapted services. Leverage big data to analyze user demands and dynamically optimize service content and spatial renovation schemes, enhancing service precision and operational efficiency.

5.4. Policy guarantee optimization: Improve integration mechanisms for urban renewal and elderly care services

5.4.1. Introduce special policy norms

Align with Dalian's urban renewal and pension service development plans to issue targeted policies, clarifying construction standards, configuration requirements and acceptance criteria for disability-adapted age-friendly leisure facilities during renovation of old communities and public spaces. Formulate service specifications for leisure pension services for disabled elderly, defining service content, workflows and quality standards to fill gaps in special institutional arrangements.

5.4.2. Improve funding guarantee mechanisms

Set up special fiscal funds for leisure pension services for disabled elderly to finance barrier-free spatial renovations, facility upgrades, talent training and service operations. Integrate urban renewal funds, special elderly care subsidies and disability support funds to coordinate protection of leisure pension services for special elderly groups. Introduce market-oriented support policies including tax reductions, venue subsidies and project grants to attract social capital into the construction and operation of leisure pension services for disabled elderly.

5.4.3. Establish a multi-department linkage mechanism

Build a cross-departmental linkage mechanism covering housing, civil affairs, disabled persons' federations, culture and tourism, sub-districts and communities, clarifying respective responsibilities to form a full-process collaborative workflow spanning urban renewal planning, spatial renovation, service supply and supervision. Incorporate optimization of leisure pension services for disabled elderly into urban renewal assessment indicators to strengthen supervision and implementation, ensuring full delivery of renovation and service policies.

5.5. Social atmosphere optimization: Foster an inclusive and friendly elderly care service environment

Promote the concept of leisure pension for disabled elderly through community publicity, new media

promotion, and public welfare activities, raising public awareness of their spiritual and rehabilitation leisure demands. Regularly launch disability support and age-friendly public welfare activities to encourage social forces to participate in leisure services for disabled seniors. Strengthen psychological guidance for disabled elderly, encouraging them to actively join community leisure activities and voice service needs to break self-isolation. Build mutual support platforms for disabled elderly to cultivate a respectful, inclusive, mutual-aid and friendly social elderly care atmosphere.

6. Conclusions and prospects

6.1. Research conclusions

Taking urban renewal as the core perspective and focusing on optimizing leisure pension services for disabled elderly in Dalian, this paper draws the following conclusions through theoretical sorting, field research, problem analysis and countermeasure research: First, urban renewal provides spatial carriers, policy support and development opportunities for quality improvement of leisure pension services for disabled elderly. Deep integration of the two is an inevitable trend for Dalian to refine its pension service system and build an age-friendly city. Second, leisure pension services for disabled elderly in Dalian face multiple challenges, including insufficient spatial adaptation, monotonous service supply, weak operation systems, incomplete policy guarantees, and unfavorable social atmosphere. Root causes include lagging renewal planning concepts, low precision of demand identification, absent multi-stakeholder coordination mechanisms, and incomplete special guarantee systems. Third, aligned with Dalian's urban renewal and regional characteristics, coordinated efforts must be made across five dimensions—barrier-free spatial renewal, precise service supply, multi-stakeholder operation mechanisms, special policy guarantees and inclusive social atmosphere construction—to build a leisure pension service system matching the differentiated demands of disabled elderly and Dalian's urban development rhythm, realizing two-way empowerment of urban spatial renewal and quality improvement of special elderly care services.

6.2. Research limitations

This research contains certain limitations: First, the survey sample fails to fully cover all districts and counties of Dalian, limiting the representativeness of collected data. Second, differentiated detailed schemes are not formulated for varying renewal conditions across different urban districts and old communities, leaving room to refine the granularity of proposed strategies. Third, long-term practical tracking is absent, and the implementation effects of some optimization strategies remain to be verified via subsequent practice.

6.3. Research prospects

Future research can expand survey coverage, refine demand disparities across regions and disability types of elderly people, and further detail implementable strategies. Researchers may track implementation outcomes of strategies amid Dalian's phased urban renewal practice and dynamically adjust optimization schemes. Additionally, deeper integration models of urban renewal, smart elderly care, coastal rehabilitation, and leisure services for disabled elderly can be explored to build a distinctive local brand of special-group elderly care services with Dalian's coastal characteristics, delivering more valuable practical paradigms for similar cities nationwide.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Zhao A, Qi HL, Zuo L, 2026, Research on Targeted Urban Renewal Policies in Ethnic Regions from the Perspective of Common Modernization. *Journal of Northwest Minzu University (Philosophy and Social Sciences Edition)*, 2026(3): 45–54
- [2] Direction régionale de l’environnement de l’aménagement et du logement, 2017, Règles de construction, Vos Responsabilités. DREAL Hauts-deFrance, France.
- [3] Fruchart A, 2016, Le renouveau du mode de production des normes en urbanisme: Gouvernamentalité, instrumentation et gouvernance. *Rencontres internationales en urbanisme-APERAU*, Bruxelles.
- [4] Wang BQ, Zhang X, 2026, Modern People’s City: A New Logic of Urban Development in the New Era. *Jilin University Journal Social Sciences Edition*, 66(3): 131–140 + 269.
- [5] Yu L, Jia N, Li M, 2026, Creative Deconstruction and Systematic Restructuring: Freiburg Ecological Urban Renewal from the Perspective of Innovation Theory. *Urban Development Studies*, 33(4): 36–43.
- [6] Liao YS, Xia X, Lu JL, et al., 2026, Research on Age-Friendly Renovation of Urban Community Sports Facilities in China Under the Background of Urban Renewal. *Sports Culture Guide*, 2026(5): 34–41.
- [7] Guo JY, Gao MH, 2025, Crossing the Cracks of the Body—The Impacts of Assistive Technology on Persons with Disabilities. *Studies on Intelligent Society*, 4(5): 102–121 + 256–257.
- [8] Shi ZG, 2026, The Functional Mechanism of Information in Urban Community Renewal Decision-Making: From the Perspective of Multi-Participant Collaboration. *Social Sciences of Beijing*, 2026(5): 106–118.
- [9] Yi YY, Zhou P, 2019, Crisis and Reconstruction: Family Support System for Rural Disabled Elderly Under the AGIL Framework. *Journal of Nanjing Agricultural University (Social Sciences Edition)*, 19(5): 86–95 + 157.
- [10] Zhou P, 2020, “Welfare Integration” and “Welfare Separation”: Welfare Governance for the Elderly with Disabilities and Disabled Seniors. *Inner Mongolia Social Sciences*, 41(3): 42–49 + 213.
- [11] Zheng CH, Wu YD, 2022, A New Perspective for Explaining Successful Aging Among Older Adults with Disabilities: The Disability-Centered Model. *Chinese Journal of Gerontology*, 42(6): 1503–1509.
- [12] Mao ZS, 2026, Dilemmas of Collective Action and Its Governance Mechanisms in Urban Renewal — Based on the “Context-Mechanism” Analytical Framework. *Journal of Beijing University of Technology (Social Sciences Edition)*, preprint, 1–12.

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