

Original Paper

Survey and Research on the Current Situation of Rural Happy Old Age Stations in Mentougou District

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Abstract

According to the 2020 Beijing Population Census Yearbook, rural areas in the Mentougou District of Beijing have long entered into a heavily aging society, but the construction of the pension service system and the station for happy old age, which are supposed to be appropriate, is lagging far behind. For this reason, this paper mainly adopts the field research method to carry out field research on the happy old age stations in the three most representative villages in Mentougou District, to understand the situation of the old age service system and the construction of happy old age stations in Mentougou, and to summarize, summarize and analyze the problems in the status quo. It will provide a reference basis for the subsequent construction of the pension service system and Happy Old Age Stations based on the integration of rural resources, so as to promote the improvement of the quality of life of the elderly in rural areas and the development of the healthy pension industry.

Keywords

Mentougou District, rural areas, current situation survey, happy old age station

1. Introduction

1.1 Research Background

The rural areas of Mentougou District have long since entered a heavily aging society. According to the 2020 Beijing Population Census Yearbook, Mentougou District has a total population of 392,600, with a rural population of 33,660,000 and an urbanization rate of 91.43%. The rural resident population aged 60 and above is about 11,423, accounting for 33.94% of the total rural population, and the resident population aged 65 and above is 8,181, accounting for 24.30% of the total rural population (Figure 1). This is 11.08 and 8.77 percentage points higher than the aging rate of the rural population in Beijing, and

14.31 and 11 percentage points higher than the aging rate of the population in Beijing, respectively, which shows that the problem of aging in the rural areas of Mentougou District has long been imminent. In response to the serious aging of Beijing and the complex and urgent rural pension problems, the State and Beijing Municipal Government have successively issued many policies, such as the Beijing Municipal “14th Five-Year Plan” for the Development of the Elderly Career, which proposes to improve the level of rural pension services and explore and develop the rural pension service model, first of all, to build a service network centered on the rural pension institutions as the center, and the rural neighborhood mutual aid pension service points as the platform, in order to improve the quality of rural pension services. The first priority is to build a service network centered on township and village old-age institutions, with rural old-age stations as platforms and rural neighborhood mutual-help old-age service points as outlets, in order to improve the quality of rural old-age services. At the same time, it is necessary to make use of unused assets in rural areas to build facilities for the elderly, promote the renovation and upgrading of facilities in township homes for the elderly, encourage social capital to set up elderly care institutions in rural areas, and foster rural senior citizen associations in order to strengthen the social support system for the elderly. At the same time, specifications will be drawn up for the construction of rural neighborhood mutual-help elderly care service points, and plans are underway to build no fewer than 1,000 mutual-help points. Lastly, new modes of care for the elderly, such as urban and rural mutual care, seasonal care and tourism and leisure care, are being promoted.

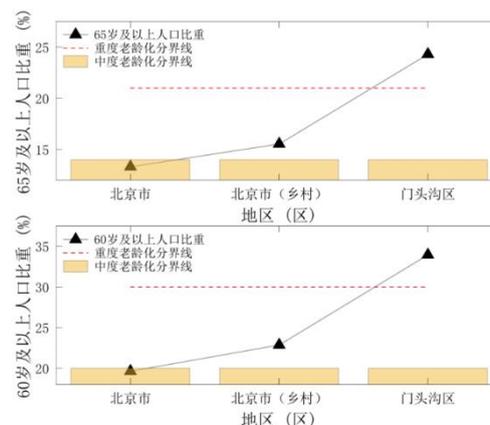


Figure 1. Rural Aging Rate in Mentougou District

1.2 Research Objectives and Significance

This paper summarizes, summarizes and analyzes the problems that exist in the rural station for happy old age by conducting field investigation and research on the layout, functional configuration, service scope and operation of the station. It not only has important guiding significance for proposing a reasonable design strategy for rural station for happy old age, but also provides a scientific basis for its rational planning and layout.

1.3 Research Methods

This paper will use literature reading, field research and other research methods to conduct an in-depth investigation and research on the situation of rural old-age care in Mentougou District. Specifically, it includes: collecting and organizing research materials related to rural pension facilities and rural elderly pension, obtaining data and information on the arrangement, functional configuration, service scope, operation and other conditions of rural happy old age stations in Mentougou District through field research, and summarizing, summarizing and analyzing the problems that exist in them.

2. Review of Domestic and International Research

2.1 Review of Research on Rural Elderly in Overseas Countries

As early as the 1930s, Hill and Hansen proposed the family life cycle theory, from which the study of empty nest families originated (Sun 2019). Duvall (1977) first proposed the concept of empty-nest family, defined as the type of family in which the children have reached adulthood and live independently, and only middle-aged or elderly couples are left in the family. Charles Webb (2007) pointed out that many elderly people have to become empty nesters or enter nursing homes to live. In this context, attention to the housing needs and quality of life of empty nesters is becoming increasingly important. Especially in rural areas, the planning and design of senior care buildings are crucial to ensuring the basic housing and living needs of empty nesters.

In the United Kingdom, off-site retirement has become a trend, taking advantage of the differences in housing prices, consumption levels, environment and climate in different geographical areas to properly concentrate on retirement. The U.S. government and financial institutions launched the “home for the elderly” reverse mortgage loan is a way to buy a house before retirement and rent the extra space to young people to maintain life after retirement (Chen & Zhao, 2011). In Germany, “saving time” public service activities have emerged on the basis of community care. Young people can volunteer to take care of the elderly and accumulate service hours to help them in their old age. More and more young people in Germany are choosing mutual care and single-parent family combinations to reduce the loneliness of empty-nesters. In addition, new models of old age such as traveling old age, migratory bird old age and self-help old age model in Danish communities have also received more and more attention (Chen & Fang, 2013).

Based on the current situation that more than 90% of the elderly in Finland tend to spend their twilight years at home, the country has adopted the model of aging in place, and provides the elderly with housekeeping, health care and other auxiliary services (Aoki, 2012). In the United States, although aging in place is also the main mode of aging, the community has a strong function in providing assistance to the elderly, and has the world’s largest nonprofit “nursing home” (Mu, 2012).

2.2 Review of Domestic Research on Rural Old-age Care

Old-age care in rural areas in China was initially based on the family model of old-age care, with the elderly relying on their children for support. In the early years of the founding of the People's Republic of China, the State began to pay attention to the problem of rural old-age care and implemented the "five guarantees of old-age support" system, which provided living allowances for the elderly who had no children or who were unable to take care of themselves. After the reform and opening up, a large number of rural elderly people and empty nesters appeared in the countryside. 1990s, the state put forward the family, society and the state "trinity" pension system, and began to establish the rural social pension insurance system, such as the new rural social pension insurance system (Bi, 2012). In the 21st century, the state introduced policies to support the development of rural pension industry, rural areas began to establish pension service facilities, such as rural "Starlight Home for the Elderly", mutual aid homes, and then to rural home pension service centers, mutual aid homes, as well as medical and nursing day care centers, etc., the pension model from the family old-age care to the community old-age care. However, the lagging development of the rural old-age care industry, the shortage of resources for old-age care services and the inadequacy of the old-age care system remain current problems.

In recent years, research scholars have deeply explored the current situation of rural old-age care from many different angles. Mu Guangzong's (2018) study comprehensively analyzes the needs of spiritual old-age care from various aspects such as emotional comfort, self-dignity, and social expectations, and proposes that in addition to personal conditions, the influence of the family and society are also supportive elements of spiritual old-age care. Liu Jieyu and Yu Jiaqing (2019) focused on the dynamic process of rural family caregiving, which provided the basis of macro and micro perspectives for relevant policy formulation. Hu Yi and Wei Houkai (2022) analyzed the income inequality phenomenon of rural elderly from the perspectives of labor income and non-labor income, and proposed strategies such as reforming the property right system and optimizing the protection system in order to increase non-labor income and improve the rural old-age situation. In addition, it also emphasizes the cultivation of correct concepts of old-age care and the creation of an atmosphere in which the whole society participates in old-age care. Chen Yunfeng and Ying Liu (2018) and Liang Jianchao and Yang Maochuan (2018) took Jizhong and Jidong regions as research objects respectively, analyzed the design problems of residential facilities for rural elderly and the current situation of old-age care through field research and questionnaires, and provided useful guidance for improving the suitability of rural residences.

The above studies provide multi-angle thinking for solving the problem of rural elderly people's old age. Through these studies, we can better understand the aging needs and realistic dilemmas of the rural elderly.

3. Research on the Current Situation of Rural Areas in Mentougou District

3.1 Research Objects Limitation

Based on the characteristics of Mentougou rural area, such as wide distribution of villages, small rural population, and uneven development of different townships, in order to ensure the representativeness and typicality of the field research villages selected for this study, we mainly screened the townships where the research villages are located in terms of geographic spatial distribution, distribution of featured industries, development of villages under the jurisdiction of the townships and distribution of the rural Happy Old Age Stages, etc., and came up with the conclusion that not only is Yanyi Township It is concluded that Yanyi Town not only has a wide geographical area, many villages under its jurisdiction (Figure 2), a remote geographical location, the less social resources are distributed, the more backward the economic development is, but also has a large proportion of rural people engaged in agriculture, a serious degree of aging, and the construction of the station for happy twilight years is not perfect, which is highly typical and representative of the townships in which the research villages are located in the paper.

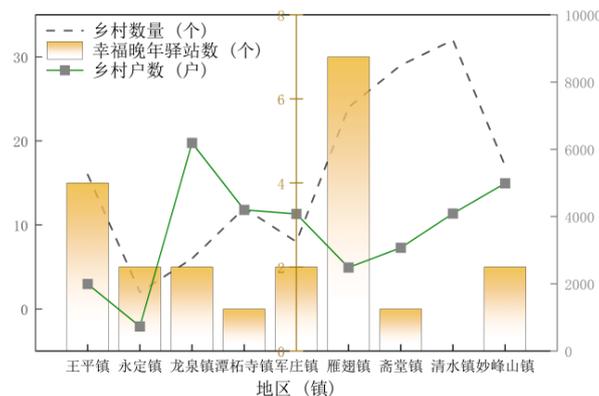


Figure 2. Number of Rural and Happy Old Age Stations by Town in Mentougou District

As the villages selected for this study need to be equipped with rural happy old age stations, according to the “2023 List of Pension Institutions and Stations in Mentougou District” issued by the Civil Affairs Bureau of Beijing Mentougou District in 2023, a total of seven villages in Yanying Town have happy old age stations available for the study, and by comprehensively screening the villages in terms of geographic distribution, characteristic industries, village size, etc., we finally identified the happy old age stations in Prince’s Tomb Village (Village A), Yanying Village (Village B), and Henan Terrace Village (Village C) as the objects of the study, and carried out an in-depth and comprehensive field study on them.

3.2 Outline of the Basic Situation of the Surveyed Villages

The pilot village is located in the hinterland of Yanyi Town and in the center of Mentougou District, situated in the foothills of the terraces, surrounded by mountains and surrounded by water, with a superior

natural environment, but its geographical location is relatively remote, and transportation is slightly inconvenient. The details of the pilot villages are as follows (Table 1):

Table 1. Research on the Basic Situation of the Village

| Classification | Village A | Village B | Village C |
|------------------------------|--------------|--------------|--------------|
| Village area | 11,162 acres | 20,460 acres | 10,035 acres |
| Total population | 483 | 519 | 377 |
| Resident population | 200 | 307 | 127 |
| Outside workers | 283 | 212 | 250 |
| Population aged 60 and above | 150 | 228 | 101 |
| Ageing rate | 75.00% | 74.27% | 80% |
| Specialty Industries | Plantation | Tourism | Tourism |

3.3 Basic Information on Rural Happy Old Age Stations

The Happy Old Age Stations are converted from the original brick or frame single-story houses built on the hillside in the village, most of which are located in the center of the village, with convenient transportation and facilities in the surrounding area, which not only makes it easy for outsiders to visit, but also provides convenience for the elderly people in and around the village (Table 2).

Table 2. Basic Information on the Rural Happy Old Age Station

| Classification | A Village | B Village | C Village |
|--------------------------|------------------------|------------------------------------|------------------------|
| Facility Type | Day care type | Full day care type | Day care type |
| Site Area | 209.50 m ² | 750 m ² | 214 m ² |
| Building Area | 205.44 m ² | 489 m ² | 207.55 m ² |
| Number of floors | | 1st floor | |
| Building Density | 98.06% | 65.20% | 96.98% |
| Building Structure | brick hybrid structure | Brick-concrete, frame structure | brick hybrid structure |
| Facility Orientation | North to south | northwest to southeast | west to east |
| Lighting and Ventilation | | favorable | |

Depending on their positioning, the pilot village post stations not only provide housing for the elderly and disabled aged 60 and above in their own villages and neighboring villages, elderly table service, home visiting service, day care service, call service, service needs assessment, health guidance, cultural entertainment, psychological comfort, education and training, intermediary services and other services,

but also provide meal services for foreign visitors. It also provides meal services for foreign visitors. It also holds regular services such as free haircuts and medical check-ups for the elderly (Table 3).

Table 3. Operation of Rural Happy Old Age Stations and Configuration of Service Functions

| Classification | A Village | B Village | C Village |
|--------------------------|---|---|---|
| Number of elderly people | Meals on site: 23 | Meals on site: 21 Meals on Wheels: 24 | Meals on Wheels: 19 |
| Number of beds | 1 | 17 | 3 |
| Number of living rooms | 1 | 9 | 2 |
| Service Scope | Village A and vicinity | Village B, Village C, etc. | Village C |
| Service Targets | Elderly persons aged 60 and over | Persons with disabilities, persons aged 60 and over | Foreign visitors, senior citizens aged 60 and above |
| Service Content | Call service, meal service, day care, health guidance, culture and recreation, psychological solace | Day care, home-delivered meals, escort service, cultural and recreational services, assisted meal service | Elderly dining table, home visiting, day care service, call service, service needs assessment, health guidance, culture and recreation, psychological comfort, education and training, intermediary service |
| Activities | Haircuts, free medical checkups, etc. | Haircuts, free medical checkups, etc. | Haircuts, clinics, free medical checkups, etc. |

3.4 Analysis of Functional Configurations and Area Indicators of Happy Old Age Stations

3.4.1 Village A Happy Old Age Station

The post station was constructed by remodeling the original activity room in the village in accordance with the requirements for the construction of a post station, and the functional spaces were appropriately adjusted according to the original layout while keeping the building structure unchanged. On the premise of providing elderly services for the elderly, the post station retains its original function (providing a convenient place for the village's activities such as weddings, funerals, and full moons) (Figure 3) (Table 4). The functional divisions and area indicators are as follows:



Figure 3. Floor Plan of the Happy Old Age Station in Village A

Table 4. Functional Configuration and Area Indicators of Happy Old Age Stations in Village A

| Classification | Building area(m ²) | Usable area(m ²) | purpose |
|---------------------|--------------------------------|------------------------------|---|
| Dining Room | 107.03 | 97.49 | Dining, movies, fitness, events, etc. |
| Rehabilitation Room | 16.69 | 14.32 | Simple rehabilitation and care for the elderly |
| Kitchen | 39.98 | 35.70 | Preparation of meals for the elderly |
| Dining Room | 27.99 | 23.70 | Places for organizing, distributing and temporarily storing finished foodstuffs and sidelines |
| Lounge Total | 13.75 | 11.13 | Day breaks for the elderly |
| Total | 205.44 | 182.34 | - |

On the whole, the station not only has a reasonable spatial layout, but also has clear main functional zoning, complete equipment, and smooth and convenient transportation and operation flow. However, there are still some shortcomings, for example, the furniture layout of the lounge is slightly chaotic; the dining room is not partitioned into functional spaces; the equipment in the rehabilitation and physiotherapy area is slightly rudimentary; there is a waste of spatial resources in some of the functional areas; there is a lack of space for outdoor recreation and activities for the elderly; the indoor decorating style is too institutionalized, which is a lack of “home” atmosphere for the elderly; some of the indoor areas are not equipped with handrails, which are not suitable for the mobility impaired elderly. The interior decoration style is too institutionalized and lacks a “home” atmosphere for the elderly; some indoor areas are not equipped with handrails, which is inconvenient for the elderly with limited mobility.

3.4.2 Village B Happy Old Age Station

As one of the four central villages in Yanyi Township, Village B's Happy Old Age Station is a full-day care station according to the construction requirements. Its functional configuration includes four main divisions: day care area for the elderly, public activity area, rehabilitation and physiotherapy area, and logistics service area (Figure 4) (Table 5).

Table 5. Functional Configuration and Area Indicators of Happy Old Age Stations in Village B

| Classification | | Number of rooms | Building area(m ²) | Usable area(m ²) |
|------------------------------|-------------------------------|-----------------|--------------------------------|------------------------------|
| spaces for the elderly | Day care Double room | 8 | 14.76 | 12.59 |
| | Double suite | 1 | 29.38 | 24.82 |
| | total | 9 | 145.78 | 125.54 |
| | multi-purpose hall | 1 | 25.24 | 22.81 |
| public space | library | 1 | 14.76 | 12.59 |
| | Recreation Room | 1 | 12.56 | 10.93 |
| | Calligraphy Room | 1 | 23.33 | 17.59 |
| | Dining Room | 1 | 167.83 | 159.59 |
| | total | 5 | 243.72 | 223.51 |
| Rehab Physical Therapy Space | Psychological Counseling Room | 1 | 12.56 | 10.93 |
| Therapy Space | infirmary | 1 | 38.05 | 34.93 |
| | total | 2 | 50.61 | 45.86 |
| | laundry room | 1 | 9.00 | 7.62 |
| | Restroom | 2 | 9.00 | 7.62 |
| | Bathroom | 2 | 14.76 | 12.59 |
| | Dormitory | 2 | 14.76 | 12.59 |
| Logistics services space | Surveillance Room | 1 | 12.61 | 10.93 |
| | Office | 1 | 12.61 | 10.93 |
| | Kitchen | 1 | 32.22 | 28.61 |
| | Dining room | 1 | 14.43 | 13.54 |
| | total | 10 | 157.91 | 137.23 |
| | total | 26 | 598.02 | 468.22 |



Figure 4. Floor plan of the Happy Old Age Station in Village B

In the courtyard space, barrier-free ramps and handrails are set up to facilitate the elderly to enter the interior; in the bathroom, barrier-free toilets and squatting toilets are set up to facilitate the smooth toileting of the elderly whose movement is not changed and to meet the living habits of the rural elderly who are used to using squatting toilets (Figure 5), etc. Therefore, this station pays attention to the needs of the elderly and provides a comfortable environment for the elderly.



Figure 5. Village B Happy Old Age Station Highlights Spatial Environment

However, whether for functionality or comfort, there are still deficiencies in some details (Figure 6), for example, the indoor arrangement of the station is slightly chaotic; the floor is not provided with anti-slip

treatment, which is a potential risk of falling for the elderly with mobility difficulties. In addition, the lighting and visual comfort of the space needs to be improved, for example, there are no handrails in the corridor space, the indoor lighting has not been designed for aging, and the light in the bathroom is dim; this will bring inconvenience to the elderly in their daily life. In addition, the protection of privacy is also a point that cannot be ignored, such as the privacy of the bathroom needs to be strengthened. At the same time, the hygiene of some spaces should not be ignored, as a clean living environment is crucial to maintaining the health of the elderly.



Figure 6. Spatial Environment to Be Improved at the Happy Old Age Station in Village B

To summarize, although many improvements have been made to the design of the stations to take into account the needs of the elderly, there is still room for improvement in some of the details. These areas for improvement are not only related to the comfort of the elderly, but also affect their basic daily activities and quality of life. As the provision of a comfortable and suitable environment for the elderly is at the core of the design of the station, more attention should be paid to these details, so that more comprehensive and in-depth consideration can be given to the maintenance of the quality of life of the elderly as well as the protection of their safety.

3.4.3 Village C Happy Old Age Station

In accordance with the requirements for the construction of the rural Happy Old Age Station (Figure 7), the Happy Old Age Station in Village C is funded by the enterprise to remodel the unused houses near the main road in the village in accordance with the construction style of the village houses and in combination with the modernist architectural style, and combines the old age pension with the rural tourism industry, which not only provides old age pension services such as day care for the elderly people in the village, but also provides food and beverage services for the foreign tourists.

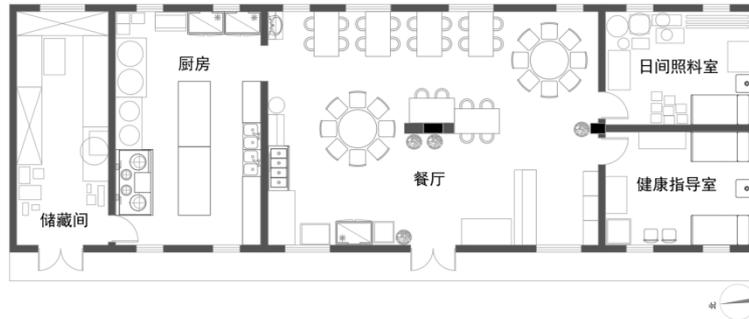


Figure 7. Floor Plan of Village C Happy Old Age Station

The station has a total construction area of 207.55m² and a useable area of 185.33m², mainly including a kitchen, a storage room, a dining room, a day-care room and a health guidance room in total of five parts, and the functional rooms are well-equipped with appropriate spatial scales, which are capable of organizing a wide range of activities and meeting the basic needs of the elderly for day-care, meals and other basic needs of old-age care (Table 6).

Table 6. Functional Configuration and Area Indicators of Happy Old Age Stations in Village C

| Classification | Building area (m ²) | Used area(m ²) | purpose |
|----------------------|---------------------------------|----------------------------|---|
| cafeteria | 93.76 | 86.44 | Meals, events and activities |
| Health guidance room | 21.70 | 18.44 | Simple rehabilitation and care for the elderly |
| day nursery | 21.70 | 18.44 | For the elderly to rest |
| bathroom | 42.38 | 38.05 | Preparation of meals for the elderly |
| storeroom | 28.42 | 23.96 | Organize, distribute and store semi-finished products and ingredients for main and side dishes. |
| total | 207.55 | 185.33 | - |

In order to create a comfortable environment for the elderly and tourists, the indoor space of the station has not only been age-adapted (Figure 8), for example, the indoor floor is paved with non-slip tiles, and the entrance is equipped with a barrier-free ramp to facilitate the passage of the elderly; the entrance prevents medical first aid kits, which is easy to cope with the emergencies of the elderly in the station; indoor hand-washing sinks are set up, which is easy for the elderly to wash their hands before meals; and the day-care and health guidance indoor is set up with professional nursing beds and The day care and health guidance room is equipped with professional nursing beds and soft lighting to provide a comfortable and safe environment for the elderly. The restaurant space inside the station is also arranged

in accordance with the unique space layout of a restaurant, such as placing a wine cooler, a bar and a beverage refrigerator inside the room to provide visitors with beverages, drinks and other services. In addition, green plants are placed in the interior to enhance the environmental quality of the space.



Figure 8. Village C Happy Old Age Station Highlights Spatial Environment

However, the post station, which should be a place to provide pension services for the elderly, has become a place for tourists and outsiders to dine and rest, and the room in the post station, which should provide day care and nursing care for the elderly, has become a room for the daily rest of the staff of the restaurant and for piling up sundries (Figure 9). Although the post station can, in this way, turn a loss into a profit and drive the economic development of the rural tourism industry, the move will have an impact on the enjoyment of pension services by the elderly in the village and the However, this will have an impact on the enjoyment of pension services by the elderly in the village and their ability to lead a peaceful life in old age. In addition, the environmental hygiene of some spaces in the station is poor, such as the storage room and kitchen.



Figure 9. Spatial Environment to Be Improved at the Happy Old Age Station in Village C

3.5 Operation and Service Supply Analysis of Happy Old Age Stations

The operation and service provision of Happy Old Age Stations is generally similar, with all of them being publicly-run and privately-run, subsidized by the Government and invested in and operated by private enterprises. The stations provide three meals a day: breakfast, lunch and dinner; however, some of the stations provide only two meals, lunch and dinner, with a significant gap between the actual quality of the meals and the standards set, or do not provide home delivery of meals, which has an impact on the

retirement lives of rural elderly people, especially those who are unable to take care of themselves or are semi-self-caregivers.

In terms of fees and logistical supplies, each station depends on the company's mode of operation and the actual situation, and probably maintains a monthly cost of between 200 and 400 yuan per elderly person for meal assistance. In terms of service staffing, the promotion of working in close proximity has provided employment opportunities in the villages, however, the service staff have not received systematic and relevant training, and the quality of the elderly services they provide is generally low. The details are as follows:

For the day-care Happy Old Age Stations (Villages A and C), the services provided can meet the basic needs of the elderly in rural areas. However, compared to the other stations, the full-day care Happy Old Age Stations (Village B) provide more types of elderly services, but also imply higher costs.

As a result, the station mainly provides the elderly with the most basic services of assisted meals and a small number of recreational activities, while other services are basically left unused (Table 7). For example, at present, there are no elderly people living in Village B's post station, and apart from the dining room, kitchen and meal preparation room, which are often used by the elderly, other rooms such as day-care rooms, bathrooms, recreation rooms and dormitories are basically unused, or stacked with miscellaneous objects, or occasionally used by staff members, and so on.

Table 7. Functional Configuration and Area Indicators of Happy Old Age Stations in Village B

| Classification | | Village A | Village B | Village C |
|---------------------------------|-------------------------------|-----------|-----------|-----------|
| Day care spaces for the elderly | Double room | — | × | × |
| | Double suite | — | × | — |
| | multi-purpose hall | — | × | — |
| | library | — | × | — |
| | Recreation Room | — | × | — |
| public space | Calligraphy Room | — | □ | — |
| | Dining Room | ■ | ■ | □ |
| Rehab Physical Therapy Space | Psychological Counseling Room | × | × | × |
| | infirmary | — | □ | — |
| | laundry room | — | × | — |
| | Restroom | — | □ | — |

| | | | | |
|--------------------|-------------------|----------------|---------------|---|
| | Bathroom | — | × | — |
| | Dormitory | — | × | — |
| Logistics services | Surveillance Room | — | × | — |
| space | Office | — | × | — |
| | Kitchen | ■ | ■ | ■ |
| | Dining room | ■ | ■ | ■ |
| Inactive:× | Occasional use:□ | Frequent use:■ | No function:— | |

4. Principles and Strategies for Spatial Design of Elderly Living Spaces in Elderly Facilities

An in-depth field survey of the Happy Old Age Stations in the pilot villages revealed a series of problems, which are described and analyzed below:

- 1) The ageing of the rural population in remote areas is more serious. The reasons for this are twofold: on the one hand, compared with cities, rural areas have poor service facilities, few employment opportunities, insufficient educational resources and backward medical care; young people and families in rural areas have gone to the cities in search of a better life and employment opportunities, leading to a massive exodus of the workforce from rural areas, with the remainder being mainly elderly people, resulting in the ageing of the rural population. On the other hand, the lifestyles and values of rural families have changed as a result of economic development and social change. The traditional concept of a large family has gradually faded, and young couples are more inclined to have only one or a small number of children in pursuit of better education and quality of life. This has led to a decline in the birth rate and an increase in the proportion of elderly people in rural areas.
- 2) Rural Happy Old Age Stations are not well built. Most villages have not yet constructed a station for a happy old age. Many rural areas lack a station for a happy old age, which prevents the elderly from accessing elderly services. The lack of station facilities restricts social interaction and fulfilling activities for the elderly in rural areas, limiting their quality of life in old age.
- 3) The construction, operation and quality of services provided by the rural Happy Old Age Stations vary. Most of the stations in operation provide meals for the elderly, while other services are mentioned but poorly implemented; for example, some stations do not provide door-to-door meal delivery, which does not benefit the elderly whose mobility is unchanged. The equipment provided in the stations does not meet the needs of the elderly. For example, some stations provide fitness equipment such as treadmills and motorcycles for the elderly, but they are never used by the elderly, resulting in an extremely low utilization rate of the functional space allocated. The real needs of the elderly are not met.

- 4) The functional configuration of rural stations is relatively homogenous, providing mainly meal assistance services, while other services are relatively lacking. The needs of the elderly are diversified; in addition to meals, they also need support in terms of medical care, rehabilitation and fitness, culture and recreation. However, most of the stations lack medical facilities and professional staff to provide comprehensive medical services. The lack of rehabilitation equipment and professional rehabilitators prevents the elderly from receiving the necessary rehabilitation treatment. In addition, the lack of cultural and recreational facilities and activities limits the spiritual life and social interaction of older persons.
- 5) The spatial layout of the stations is slightly flawed and does not meet the actual needs and mobility characteristics of the elderly. First of all, the lack of barrier-free facilities makes it impossible for elderly people with mobility problems to enter and exit the stations easily. Secondly, the division of space and layout inside the post stations also need to be improved. Stations should rationally plan their internal space, divide them into different functional zones, and allocate an appropriate amount of space for each zone, so as to improve the efficiency of the use of building space. Finally, in order to protect the privacy of the elderly and provide a comfortable resting environment, post stations should provide suitable private resting areas.
- 6) Ageing-friendly design is a key element in ensuring that older persons can use the facilities in the stations safely, comfortably and conveniently. However, the ageing-friendly design of many stations is still inadequate. First, the lack of non-slip flooring and handrail facilities can easily lead to falls and injuries among older persons. Therefore, post stations should adopt non-slip flooring and install suitable handrails where needed to provide additional support to the elderly. Secondly, the lack of specially designed toilets and bathrooms causes inconvenience to the personal hygiene of the elderly. Post stations should provide restrooms that meet the needs of the elderly, including suitable toilets, handrails and non-slip facilities. In addition, post stations should consider intelligent and convenient designs to meet the various needs of the elderly in their daily lives.

5. Conclusions

This paper will use literature reading, field research and other research methods to conduct an in-depth investigation and research on the situation of rural happy old age stations in Mentougou District. It is found that there are problems such as uneven operation and service quality, relatively single function configuration, mismatch between the supply and demand of pension services, low space utilization rate, and space layout and decoration that do not conform to the principle of appropriate aging design in rural rural old age stations. In the future, the government and relevant departments should continue to improve relevant policies and standards to refine and standardize the construction of rural and elderly services and happy old age stations. Researchers and scholars should strengthen the research on rural happy old

age stations. In order to meet the diversified needs of the rural elderly in their old age and to improve their quality of life and sense of well-being.

References

- Aoki. (2012). Learning from foreign old-age pension models. *Consultation Forum*, 1, 50-52.
- Bi, Z. H. (2012). *Research on the Impact of Population Rural-Urban Migration on the Basic Pension Benefits and Financial Burden of New Rural Insurance* (Master's thesis, Liaoning University). Retrieved from https://kns-cnki-net-443.webvpn.ncut.edu.cn/kcms2/article/abstract?v=T-ziT3f7Rg9FdwL0d8PBkEfsHFDtkMZolNSwT_-eOcUlWEZ0NslYFe1rxHcxp1dzNUQk_F0a0IhgldGgNzogTkt9x8kFGN-y2IRhXotKmpjmQHKNTf7lXwvu8WIJ8MGi&uniplatform=NZKPT&language=CHS
- Chen, J. M., & Fang, X. Y. (2013). International Experience and Implications of Old Age Security for Empty Nest Elderly. *Journal of Harbin University of Commerce (Social Science Edition)*, 5, 51-57.
- Chen, L. N., & Zhao, G. Y. (2011). Drawing on foreign experiences to build a Chinese model of elderly care. *Journal of Hengshui College*, 3, 23-26.
- Chen, Y.-F. & Ying, L. (2018). Analysis of the current situation of mutual-help elderly care facilities in rural areas of Jizhong and exploration of design strategies. *World Architecture*, 6, 115-119+124.
- Hu, Y., & Wei, H. K. (2022). Income Structure and Income Inequality of Rural Elderly in China--An Introduction to the Current Pension Situation of Rural Residents in China. *Journal of Nanjing Agricultural University (Social Science Edition)*, 4, 45-57.
- Liang, J. C., & Yang, M. C. (2018). A survey study of rural elderly care in Jidong based on aging-friendly design. *Popular Literature and Art*, 3, 245-246.
- Liu, J. Y. & Yu, J. Q. (2019). The current situation of rural family care in China: The family care cycle under population mobility. *Open Times*, 1, 179-193+7.
- Mu, G. Z. (2012). Community-based elderly care model in the United States. *People's Forum*, 22, 52-53.
- Sun, Y. D. (2019). *Survey Research on the Current Situation of Rural Empty Nest Elderly in Dalian Pulandian District* (Master's thesis). Dalian University of Technology.