

Discussion on the Construction of Residential Environment Evaluation Index System of Apartment for the Elderly

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Abstract: With the rapid development of China's economy, people's material living standards have been steadily improved, and medical conditions have been gradually improved. While we are happy with the rapid development of our country, the problem of population aging has gradually begun to appear. According to the analysis of the current situation, the population aging will further expand in the future, the situation of population aging is difficult to change in a short time, and the impact on social life will be greater and greater. The environment and facilities of living places are important contents that affect the quality of life of the elderly. In order to improve and improve the living environment of the urban elderly, we must scientifically evaluate their living environment from all aspects, analyze the current living environment of the elderly, collect the feedback of the elderly through the questionnaire, verify their actual use effect, make further improvement and optimization, provide effective reference for the design of apartments for the elderly, and design a comfortable living environment for the elderly.

1. Introduction

With the rise of elderly apartments, this pension model has become the most popular model in recent years. Apartment for the elderly is a social pension model for the elderly. It provides necessary facilities for the elderly and organizes elderly activities according to their psychology and characteristics. Great changes have also taken place in the structural design of the house, all of which are to facilitate the life of the elderly, meet the basic needs of the elderly and reassure their children. The author hopes to understand the use of apartments for the elderly and the satisfaction of the elderly by establishing the evaluation index system of apartments for the elderly, because timely information feedback can help architects make more comprehensive consideration in the process of overall planning and architectural design.

2. Concept of Apartment for the Elderly

Apartment for the elderly refers to the apartment type residence for the elderly designed for the centralized residence of the elderly and in line with the physical and mental characteristics of the elderly. It has a catering, cleaning and hygiene, cultural entertainment and medical and health care service system. It is a residential type of comprehensive management[1].

The apartment for the elderly defined in this paper refers to the environmental characteristics that take the outdoor environmental elements of the apartment for the elderly as the carrier, meet the outdoor activity needs of the elderly through aging design, improve the elderly's perception of the environment, and help the elderly improve their physical and mental health. People's living environment not only represents the protection of this space. It is an environment closely related to our life and all aspects of life. Therefore, the local environment where the elderly live must be able to meet their long-term and humanistic needs. We should link transportation, entertainment, medical treatment and other living conditions, and pay attention not only to living space, but also to other social services.



Figure 1 Elderly care apartment.

2.1. Cultural environments

The family relations and social relations of the elderly under the social system security, as well as the social help relations, are all within the scope of social politics. We can call it a soft environment. Only by combining the hard environment and soft environment can we create an environmental living system for the elderly[1].

2.2. Substance environments

Relevant facilities in the local environment where the elderly live. Generally, the buildings and residences they live in should be equipped with supporting facilities that can meet their relevant needs. This is not only the planning scope of the construction industry, but also what we can see and feel, but also the focus of the construction industry.

3. Evaluation Index System

The construction and service level of apartments for the elderly are mainly divided into three aspects: index system, weight system and evaluation standard.

The index system mainly refers to the specific performance of the living environment and its role of the elderly. The index system aims to distinguish the specific characteristics of different pension models and form an interrelated index group with them[2]. The index system is the basis for the construction and evaluation of apartments for the elderly. It is not only the overall framework of the living environment of apartments for the elderly, but also an important reference basis for the grade evaluation of apartments for the elderly. Generally, we divide the index system into three levels: primary index, secondary index and tertiary index. The relationship between indicators belongs to the total score subdivision relationship. The next level indicator is a specific description of the upper level indicator. Generally speaking, the first two indicators are mainly observed when judging the apartment for the elderly.

Weight coefficient, referred to as weight for short. In short, the weight coefficient is the contribution division of various indicators of pension apartments, that is, the degree of importance. There are many evaluation indicators of apartments for the elderly, but the importance of each item is different from each other. The weight coefficient is to distinguish the indicators of different important levels.

The evaluation basis refers to the evaluation criteria for apartments for the elderly according to the national laws and regulations on construction, services, medical system and so on. This paper focuses on the analysis of the living environment indicators of local apartments for the elderly in Taiyuan, in order to provide a set of evaluation index system suitable for local apartments for the elderly in Taiyuan, which is not necessarily suitable for all parts of the country. Taking Taiyuan as an example, this paper attempts to formulate a set of scientific and cultural indicators that can meet

the needs of the elderly in Taiyuan.

4. Determination of Comprehensive Evaluation Index System and Evaluation Criteria for Residential Environment of Apartments for the Elderly

Refer to China's current standards and specifications. In the process of specifying the evaluation system standards, the combination of qualitative indicators and quantitative indicators is adopted. Qualitative index refers to the evaluation through the actual experience of the evaluator and relying on his subjective judgment. In order to improve its operability, the qualitative index is indirectly assigned and quantified, so as to make this kind of index accurate. Quantitative indicators refer to the indicators that can obtain data through statistics. When evaluating quantitative indicators, the corresponding standards and specifications are used as the reference basis.

The evaluation standard is to assign and score all indicators, including qualitative and quantitative indicators, and implement quantitative operation to lay a good foundation for the evaluation of the whole index. In the evaluation process, it can be evaluated according to three levels: 1, 0.5 and 0. 1 is the full score, which means that the index fully meets the specifications or meets the living requirements of the elderly; 0.5 is the middle score, that is, the performance is average, which only meets the specifications or the basic use requirements of the elderly; 0 is the lowest score, which means the performance level is poor, does not meet the specifications or is not conducive to the use of the elderly. The scoring process should be objective, true, fair and impartial.

5. Description and Classification of Evaluation Results

The target layer of the residential environment evaluation index system of the elderly apartment is finally divided into five grades: excellent, good, medium, qualified and poor, and the target layer can evaluate the residential environment of the elderly apartment from a macro perspective, so that people have a relatively overall understanding of the residential environment of the elderly apartment:

Poor: the living environment of the apartment for the elderly is poor, which will seriously affect the daily life of the elderly and even shorten their life span. Old people are not suitable to live here. There are many problems in the living environment.

Passing grade: apartments for the elderly can only meet the daily living conditions of the elderly, can not carry out more complex activities, and can only meet the general spiritual needs of the elderly.

Intermediate: the living environment of apartments for the elderly is general, which can generally meet the daily life needs of the elderly, but there is still considerable room for improvement in life comfort, and some functions need to be supplemented.

Good grade: apartments for the elderly can better meet the daily life of the elderly and carry out some daily activities conducive to the physical and mental health of the elderly, but they may be limited by scale and working capital, so there is room for further development.

High quality: the apartment for the elderly has perfect facilities, perfect management and service system, and can carry out a large number of daily activities beneficial to the physical and mental health of the elderly. The elderly can greatly meet the material and spiritual needs in their daily life.

6. Summary and Case study of Apartment for the Elderly

6.1. External environmental problems

The outdoor sidewalk of the apartment for the elderly is unreasonable, and there is a lack of reasonably arranged rest areas along the way; The walking route is too long; Therefore, the comfort of the elderly is poor, and the setting of pedestrian roads cannot enter various activity places in the residential area. Therefore, the sidewalk has not been fully and reasonably utilized. In addition, the space design of some higher positions is not humanized, lacking the design and configuration of barrier free facilities. The road near the swimming pool is relatively flat, and there are no protective

facilities such as guardrails. The elderly are inconvenient to move and their physical motor function decreases. In case of emergency or accident, it is very dangerous without guardrail protection.

There are also great potential safety hazards in the outdoor green space of apartments for the elderly. Most of the trees growing in the park are deciduous broad-leaved trees. Every autumn and winter, a large number of leaves fall, covering the sidewalk and scattered in the park with the wind. As it is difficult to ensure timely cleaning, the fallen leaves on the sidewalk have brought great inconvenience to the travel of the elderly. In addition, affected by autumn frost and antifreeze, the leaves are covered with dew, resulting in very slippery ground, which is easy to cause the elderly with poor mobility to slip and get injured, resulting in physical injury.

6.2. Internal environmental issues

The problem of room entrance space is representative, which is mainly reflected in the lack of humanized design. There is a height difference in the entrance space, but there is no barrier free ramp, which has a great adverse impact on the access and movement of the elderly with mobility difficulties, especially the elderly using wheelchairs; Secondly, the entrance space is narrow and there is not enough space for the elderly to rest, change shoes and stools, which is more inconvenient for the elderly to use wheelchairs, and the access, movement and steering of wheelchairs are adversely affected.

The bedroom is the main living and activity area for the elderly in the room. At present, single rooms that can accommodate 2 to 3 people are the main types of apartments for the elderly. The bedroom is shared by two or three people. You can't live in one room alone. Privacy is not good, and the right to privacy cannot be effectively guaranteed; Secondly, the bedroom area is too small to make room for family or friends. In addition, if the wheelchair is paralyzed, it is inconvenient to get in and out of such a space. Second, the layout of the interior space of the bedroom is unreasonable. Like the living room, too much furniture can not help the elderly too much, but a waste of space(As shown in Figure 2).



Figure 2 Entrance space of apartment for the elderly.

7. Conclusion

With the improvement of social living standards and medical conditions, the problem of social aging is becoming more and more serious. Facing the rapidly growing aging population, how to properly settle has become the focus of social discussion. In recent years, apartments for the elderly with the nature of enterprises have gradually come into public view, but there are also many problems in apartments for the elderly. Through the specific analysis and research of local apartments for the elderly in Taiyuan, this paper reconstructs the comprehensive evaluation index system of the living environment of apartments for the elderly. With the development of the apartment system for the elderly and the development of the living environment, it should be able to provide more scientific indicators for the elderly, and gradually improve the applicability of the apartment system.

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