Research on Aging in Place Demand Elements in China's Old City Regeneration

Fan Dandan

Anyang Institute of Technology, College of Art and Design, Anyang 455000, China

Abstract: The proportion of the elderly population aged 60 and over in China is rapidly increasing. Although the old city where the elderly live is outdated and there is a safety hazard, most elderly people still hope to spend the rest of their lives in the community where they are located. Completely tearing down and rebuilding old communities is not suitable for old city regeneration projects. Therefore, it is necessary to formulate a regeneration strategy suitable for the community in order to achieve in-situ elderly care. The research is based on AIP (aging in place) concepts and demand projects. After investigating two elderly people who have lived in the Ruhe community for a long time, through analyzing their pain points and combining the detailed elements derived from the previous research, a total of 36 AIP detailed elements suitable for the regeneration of the community were summarized.

Key words: AIP, old urban, elders, regeneration.

1. Introduction

Data from China's sixth national census in 2020 show that the population of 60 years old and above is 264.02 million, accounting for 18.70% of the total population [1]. A society in which the proportion of the elderly accounts for 10% of the total population or the elderly over the age of 65 accounts for 7% of the total population is called an aging society. Most cities in China have reached severe aging. It is estimated that by 2050, the elderly population over 60 years old will reach about 400 million, accounting for 30% of the total population. Most of these elders live in old urban areas, which have outdated facilities and serious health and safety problems. Because they have lived in their familiar community environment for a long time, they have developed a sense of belonging and identity in the community, and most of them have the desire to spend the rest of their lives without leaving their familiar community.

Therefore, the previous method of overall relocation and reconstruction is no longer suitable for these areas,

while the concept of AIP (aging in place), which is more in line with the wishes of the elderly, has been applied in many cities in recent years and proved to be more suitable for the needs of the majority of the elderly [2]. However, regions with different cultural backgrounds have different demand projects for AIP pension concept. Finding out projects that meet the needs of this region plays a positive role in promoting the research on regeneration of old communities in the aging era.

1.1 Research Background

A society in which the elderly accounts for 10% of the total population or the elderly over 65 accounts for 7% of the total population is called an aging society. In 2020, 149 cities at prefecture level and above in China accounted for more than 14 percent of the population aged 65 or above, entering the depth of aging. In the future, more cities will enter deep or severe aging. Deep aging puts forward higher requirements for regeneration of old city [3].

Zhengzhou City is an important central city in central China. Ruhe community is located in the southwest of Zhengzhou City. The community was built in 1985 and has been maintained until now. It

---
Corresponding author: Fan Dandan, Ph.D./Lecturer, research fields: environmental design, and space design for the elderly.

has a diverse spatial environment and is the earliest residential community in Zhengzhou with a large scale and relatively complete supporting facilities. From the analysis of demographic characteristics, spatial structure, community service facilities, public space and other factors, Ruhe community embodies the changes in modern Chinese housing and has a typical representation.

The community is residents in their 20s to 40s who entered the city after industrialization in 1945, as well as residents who originally lived here. As shown in Fig. 1, after decades of development, the city is expanding, and the areas where these residents live have already experienced aging equipment due to construction. The facilities are not perfect and can not meet the needs of the elderly. In this area, there is a need to improve the quality of housing, public health, medical care, environmental quality, and social support systems.

Therefore, it is necessary to develop a regeneration strategy in line with the living environment of the area, so that the elderly living in the community can continue to live in the local community and enjoy their old age.

Fig. 1   Ruhe community living environment status.

To this end, it is necessary to find out the most fundamental demand elements in the actual life of the elderly in the Ruhe community.

2. Method and Materials

In order to find out the specific demand elements that meet the needs of AIP elderly care in the Ruhe community of Zhengzhou, this article first reviews the sustainable life concept of AIP in community elderly care and demand projects, and summarizes the universally applicable demand indicators. The elderly conducted interviews to investigate the daily life of the elderly, and on this basis, a customer journey map was drawn to summarize the AIP demand items necessary for the elderly living in the Ruhe community. The proposal of the demand project is defined as six types of projects as the constituent conditions of the demand project by adding the sense of community belonging and the housing, transportation, health and care, social participation and social communication examined in the previous research, and 14 items and 26 detailed elements are obtained. Then, through a one-step investigation and observation, and analysis of the journey trajectory of the elderly, combined with the existing AIP evaluation needs project, a total of 36 detailed elements of AIP needs suitable for the social development of the Ruhe community are proposed.

2.1 The Concept of AIP

AIP means "to live continuously in one's own place without leaving one's familiar home environment". It has two main meanings: first, it hopes to have an ideal residential policy for the elderly, which is the choice of living space for the elderly, including the elderly's residence and the familiar environment of the community. A second interpretation of AIP allows older people to continue to live independently as they age and represents a process of reconciliation with the environment [4].

The reason for the growing interest in AIP globally is that it is seen as an alternative to reducing the

financial burden through community-based care, thereby increasing the demand for care for older people and improving their personal quality of life. Zhang [5] defines AIP as the range that can maintain existing physical, psychological and interpersonal networks in daily life, even if they continue to live in the existing house or move to another house in the community. It helps to maintain the health of older people by preventing loneliness and stress from other lives.

AIP allows individuals to continue to enjoy independent and comfortable lives in their own families and friendly communities, independent of physical aging and social aging (changes in economic power, loss of social status, etc.) [6]. AIP's design philosophy allows you to make the most of your existing living environment if you continue to live in the same environment as before, and also reduces the amount that the elderly have to pay. In fact, AIP is a concrete solution to the problem of housing for the elderly, arguably a nursing home ideology that has spread beyond the developed world in recent years, not just housing. In this study, AIP in this article not only has the meaning of providing for the aged at home, but also includes providing for the aged in a familiar community environment. The aim of AIP is to enable older persons to maintain social relationships and lifestyle habits so that they can maintain independent and comfortable lives through existing housing and familiar community environments.

2.2 Six Aspects of AIP Project Selection

Kim et al. [7] put forward an indicator for the development of an aging community in South Korea. According to the concept of AIP, the life of the elderly can be viewed from three aspects: where to live, who to live with, and how to live. The influences of transportation, residence, health and care, social participation and social communication on AIP residence policy for the elderly were investigated. However, it ignores the characteristics of "place", an

important aspect of AIP's pension concept. The concept of AIP emphasizes that the elderly should spend their old age peacefully in a familiar environment. The familiar environment can also make the elderly feel dependent, that is, the sense of community belonging to the place [8]. Therefore, the sense of belonging to the place is crucial to the composition of AIP. Therefore, this study defines the AIP needs of the elderly as 6 aspects of life, as shown in Fig. 2, transportation, health and care, social participation, social communication and community belonging.

The AIP project proposed in the study was conducted in a specific area survey, but the research method can be interpreted as targeting areas that contain multiple fields related to the AIP rather than a specific area. For this reason, projects that are repeated more than twice are selected from various policies on population aging and urban environment. After analysis, a total of 26 detailed items are summarized.

2.3 Observation and Research on the Life of the Elderly

Since the founding of The People's Republic of China, many old people living in the cities over 60 years old in Ruhe community have reached the middle class through active participation in economic activities. In the early days of urban development in the 1970s, these settlements were the centers of rapid economic growth. However, with the passage of time, the public facilities near the residential areas have become outdated, and the number of residents has increased rapidly, leading to the deterioration of the living environment of the community.

In addition, the one-child policy has led to the phenomenon that the family structure of most urban residents is the elderly (4 people), parents (2 people) and children (1 people). Coupled with the living environment, most elderly people help their grandchildren to go to school and take care of them after school while their children live independently

Fig. 2   6 aspects of AIP project selection.

near home. Therefore, they want to live close to their families in areas where they have been accustomed to living for many years and can live a basic life financially, so they have a strong desire to improve the environment to improve the quality of life in the future.

In order to obtain the different demands of the elderly from AIP, this study conducted an interview and survey on the living environment and outlook of the elderly, and formulated the customer itinerary based on this. In the customer itinerary chart, the elderly analyzed the pain points of using the living environment in the living space, and evaluated the service utilization process in the elderly's action and action process. By presenting various facilities and

experiences of community pension space visually, the elderly can be more intuitive in the life of local pension space and clearly find the inspiration of pension.

In this study, 2 representative middle class elderly people aged over 60 who have lived in Ruhe community for more than 5 years were selected for observation and research. Through visits and investigations, the daily activities of the elderly were analyzed, compared with the evaluation items selected before, and the corresponding evaluation items were added through investigation and analysis.

3. Survey on the Needs of the Elderly through Life Observation

By observing the old man's daily life track and drawing the customer itinerary, as shown in Fig. 3, we can intuitively reflect the old man's life needs and mood changes. Combined with the one-to-one interview, we can sum up the details of the old man's activities.

Fig. 3   Survey object analysis chart.

Table 1 The elderly need content sorting (the underlined part is the new elements from the survey).

Aspect	Items	Detailed elements
Living	Indoor	Convenience of facilities; residential safety; <u>comfort</u>; privacy protection
	Outdoor	Accessibility of facilities; convenient surrounding living conditions; <u>the public space</u>
Transportation	Public	Bus station proximity; public transportation is easy to use; <u>up and down traffic AIDS</u>
	Walking	The road is smooth and easy to walk; <u>a seat on a walk</u>
	Driving	Clear traffic directions
Health and care	Community support	Daily life support; assisted nursing service; <u>community delivery service</u>
	Diagnosis and treatment	Early detection and treatment of chronic diseases; health care literacy is widespread
	Natural environment	Green space; <u>get in touch with nature</u>
Social communication	Information	Newspapers, magazines (offline information); <u>smartphone use (online messaging); be concerned with social events</u>
	Communication	Communication with the younger generation; friend communication; elderly centre
Social participation	Economic independence	Have an income that you can control; <u>re-employment of the elderly has been expanded</u>
	Social activities	Support dedication; recreational activities; lifelong learning
Community belonging	Community identity	Neighborhood community; a familiar neighborhood
	Spiritual satisfaction	A home full of memories; respect; <u>living space for 2-3 generations</u>

Elderly A is often performed in an area within 1.5 kilometers from home. The elderly often go out by bus, and there are no rest facilities at the bus station, which is somewhat inconvenient. The apartment houses where the elderly live are aging buildings, and the stairs and other facilities need to be improved. The daily tasks of the elderly are also responsible for the meals of their grandsons. Sometimes the sons and daughters-in-law will come back to live for a few days and need a space for 2-3 generations to live together.

There is no space for walking in the place where the elderly B lives, so he can only take a walk on the road outside the apartment. However, there are many obstacles and unevenness on the road, which is not conducive to the passage of the elderly. In addition, the location of the facilities in the house is not convenient for the elderly to use. The old age life of the elderly is relatively free and colorful, and they have frequent contacts with familiar friends. But the management of chronic diseases is the part that the elderly are worried about.

Two elderly were visited and investigated to explore their demands under different types of elderly people and living conditions. In addition, the project obtained from the prior study is verified to explore whether it meets the needs of the elderly in Ruhe community. Finally, the detailed projects of the two times were integrated, and the repeated parts were removed. As shown in Table 1, a total of 36 projects were obtained. These projects reflect the major social hot issues and concerns that are currently relevant to most of older people in Ruhe community. For example, public activity space, caring about social events, elderly use of computers and smart phones, elderly expansion of re-employment, community delivery services, convenient diagnosis and treatment services, familiar community environment, contact with nature, residential ownership, etc., are investigated as the new needs of the elderly in the community.

4. Conclusions and Recommendations

In the past, the redevelopment of residential areas was mostly to demolish all the residential areas and build new buildings. As a result, many problems have arisen, such as the destruction of the site, the inadaptability of the elderly to the new environment, and the interruption of communication between the original residents. However, in order to solve this problem, the project of local regeneration community, which must be partially improved to maintain the existing site, is being actively promoted.

Therefore, starting from the actual living environment of the elderly, this study will grasp the living needs of the elderly in the regeneration environment of the old city, reflect the specific living requirements of the elderly, explore the community living space model suitable for the elderly, and provide new directions and ideas for the reconstruction of the old community in the aging environment.

In the regeneration of old urban areas, only physical improvements such as housing, moving out and medical care are limited. It is necessary to pay attention to the expansion of non-physical regeneration. The communication between family and friends is an important aspect of social communication conditions and plays an indispensable role in promoting the communication between the elderly and the outside world. The activity center for the elderly is the place for these exchanges. Economic stability is an important factor in improving the quality of life for the elderly. Therefore, continuing to provide jobs for the elderly is an important link to improve the policy in the later period. In addition, it is also important to expand leisure activities for the elderly. Leisure activities can promote the opportunities for the elderly to participate in society, and with the growth of age, they can eliminate the inner loss or fear of changes in social relations. The familiar community environment and affection for living area are also important aspects of AIP's promotion of old age in familiar environment. Especially for the elderly in Ruhe community, having a house and a space for two or three generations to live together will reflect the influence of traditional culture and thoughts, and the close diet will reflect the elderly's dependence on the regional food culture [9].

In the study, through the intervention of urban regeneration policies for the living environment of the old city, the elderly with various needs have been improved. By exploring AIP projects in the community that the elderly are familiar with, the quality of life has been improved and specific improvement directions have been provided for the regeneration of Ruhe community. It is expected that this can ease the burden of public finance for social development, play a positive role in the construction of community environment, and provide a theoretical basis for the implementation of policies.

Project Fund

References

[1]   Yang, K. X., et al. trans. 1992. *Demographic Dictionary.* Beijing: The Commercial Press.

[2]   Yao, D. 2005. "Research on Housing the Aged in the Chinese Aging Metropolises." Ph.D. thesis, Tongji University.

[3]   Tencent News. 2021. "149 Cities in China Are Deeply Aging." Accessed March 4, 2021. https://new.qq.com/rain/a/20210906A09P4M00.

[4]   Cutchin, Malcolm P. 2003. "The Process of Mediated Aging-in-Place: A Theoretically and Empirically Based Model." *Social Science & Medicine* 57 (June): 1077-90.

[5]   Zhang, X. 2016. "Based on the Old Behavior Patterns of Living Environment Construction Research." Ph.D. thesis, Tianjin University.

[6]   Xu, Y. J. 2018. "A Study of the Senior Serviced Housing for Aging in Place in the Context of Urban Regeneration." Ph.D. thesis, Seoul National University.

[7]   Kim, S.-Y., et al. 2015. "Searching for Policy Orientation by the Analysis of Factors Affecting Aging in Place in the Aging Community." *Korean Association of Regional Studies* 23 (2): 137-64.

[8]   Prieto-Flores, M.-E., et al. 2011. "Factors Associated with Loneliness of Noninstitutionalized and Institutionalized Older Adults." *Journal of Aging and Health* 23 (1): 177-94.

[9]   Fan, D. D., and Kim, S. H. 2019. "The Study on the Residential Space in Culture-Led Urban Regeneration: A Case Study of Residential Space in Henan." In *Proceedings of the ARFEE2018*, 79, 01005.