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Strategies for the Reconstruction of Aging Public Facilities from the Perspective of Healthy Community

Wenshuang Zhu, Yijie Hu, Han Fu*
Guilin University of Technology, Guilin, China
*Corresponding author, e-mail: 56910487@qq.com

Abstract: *In the context of "aging" society, the concept of healthy community is deeply rooted in the hearts of the people. The community public facilities suitable for aging have become the focus of attention of the elderly. The reasonable performance of its design strategy helps the elderly to obtain healthy life experience. Through market research and questionnaire survey, the physiological, psychological and behavioral characteristics of the elderly were comprehensively analyzed.After obtaining the conditions of the elderly's health demand protection, combining with the people-oriented design principle, from the medical care facilities, sports and fitness facilities and social entertainment facilities three aspects of the actual case derivation, get the times innovative aging transformation strategy, so as to help designers establish the concept of health design, improve the function of community public facilities aging purpose.*

Keywords: *healthy community; public facilities;Keywords design for aging;medical treatment;sports; Social*

1 Introduction

According to the statistical data of the seventh population census, China's total population is still in the trend of continuous growth, but the growth rate of the total population slows down, and the population composition tends to be aging and fewer children.When the population over 60 years old accounts for 10% of the total population in a country or region, and the population over 65 years old accounts for 7% of the total population, it has already become an "aging" society.If this is the standard, China as early as 22 years ago entered the "aging" society.At present, 18.70% of the people in China are over 60 years old, and 13.50% are 65 years old and above. It can be seen from this that the phenomenon of "aging" facing China is very severe.
Because with the increase of the elderly population, a series of problems and challenges to maintain and promote the health of the elderly also follow.At present, China has adopted the "Healthy China 2030" Program as the national action program, adhering to the "people's health-centered health concept."

2 Impact of Healthy Community Concept on Public Facilities Design

2.1 healthy community concept

The concept of "healthy community" is an important supplement to the aging transformation of community public facilities, which includes building a healthy physical environment, a healthy humanistic environment

and a healthy crowd..In the context of building a "healthy community," the basic function of outdoor public facilities is important, However, as the humanistic spirit becomes more valued, we should pursue the deep meaning and make it develop into a healthy identity [1].From the perspective of "healthy community," the renovation of public facilities for aging is not only designed according to the physiological and psychological needs of the elderly, but also highlights the humanistic care for the elderly.From the design thinking of pure "things" to the design thinking of "people," guide the elderly to establish health awareness, cultivate good living habits, go out of the house, exercise healthy physique.

2.2 community public facilities

Relevant data sources were mainly obtained from the CNKI literature database, with the retrieval time span of 12 years, ranging from 2010 to 2021, the literature language was Chinese, the retrieval keywords were community public facilities, and the total number of literatures was 854.According to the analysis in Figure 1, the total amount of literature in recent ten years shows an upward trend. After 2010, with the increase of attention to public facilities, the number of articles published in 2010-2014 shows a rapid upward trend, and slightly decreases in 2014-2015.After the State Council issued the "Healthy China 2030" Planning Outline in 2016, the overall number of documents issued from 2016 to 2021 showed a rapid upward trend, reaching the current peak in 2021.According to the analysis of Figure 2, the key words that appear most in this research field are public facilities, followed by community, urban community, aging, accessibility, public health, etc. It can be seen that the focus has developed towards health and aging.

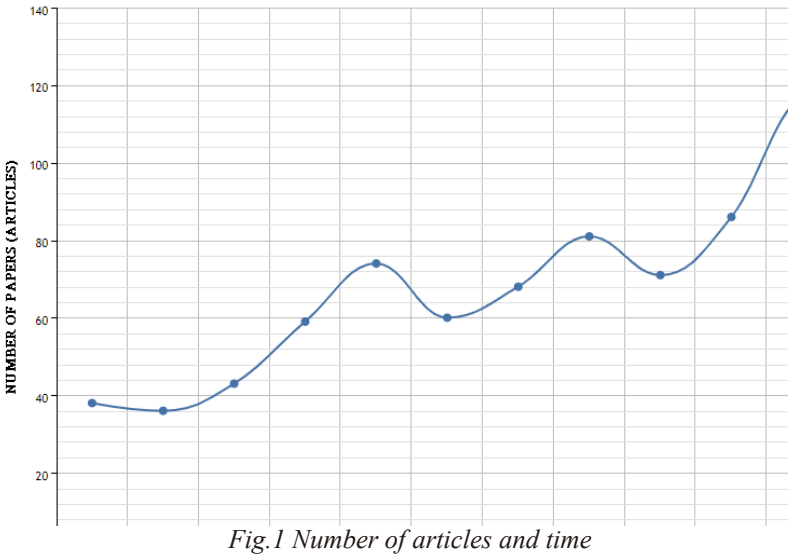


Fig.1 Number of articles and time

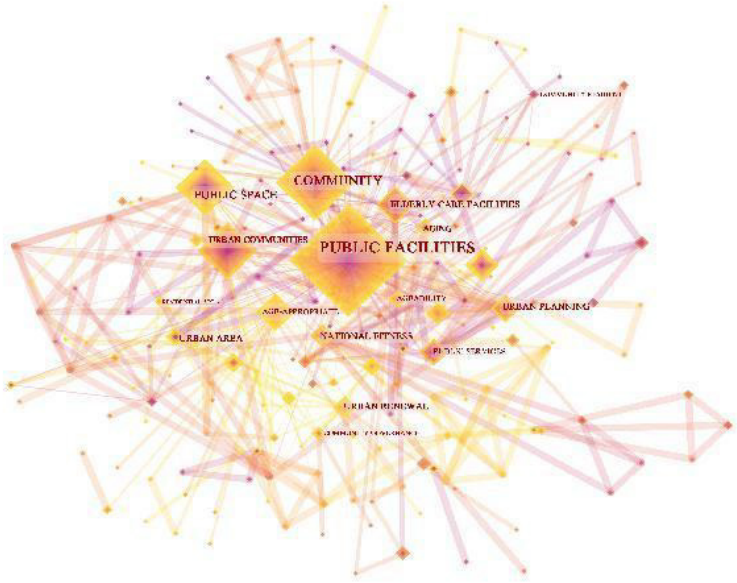


Fig.2 high frequency keyword co-occurrence

2.3 Trend of public facilities renovation

2.3.1 Healthy community as the core concept

As people's cognition of health has experienced from passive to active, from simple physical health to multi-dimensional overall health, Process of going from health in the biological sense to health in the socio-biological sense [3].The concept of "healthy community" has become the core of public facilities design and guides the health awareness of the elderly.The aging adaptation of public facilities is the foundation of building a healthy physical environment. The transformation of social entertainment facilities is to build a healthy humanistic environment, which is the goal; Finally, the transformation of medical care facilities is to achieve a healthy population, which is the result.These three elements constitute the concept of "healthy community." Under the guidance of this concept, the design should not only consider its physical function, but also reflect the care for the elderly in some details, help the elderly to establish a sense of health, so as to go out of the house to exercise and socialize.Make the facilities suitable for aging transformation play their maximum role as far as possible and improve their utilization rate.

2.3.2 Guided by the needs of the elderly

In the process of aging adaptation of public facilities, all improvement points are carried out around the needs of the elderly.The needs of the elderly are mainly concentrated in three levels.First, psychological and physical needs.With the growth of age, the elderly's perception ability declines, and the senses such as vision, hearing and taste gradually deteriorate. These factors will make the daily life and social interaction of the elderly become difficult.It can even lead to emotional sensitivity and suspicion as well as psychological paranoia. The decline of various physiological functions of the body makes the elderly think and act slowly, reduce the accuracy of choice, do things incongruously and other problems, thus bruising the polarity of the elderly's practical activities.Second, physical care needs.Through the questionnaire survey method, 300 questionnaires

were distributed, 277 of which were valid and 23 were invalid, mainly investigating the elderly suffering from chronic diseases (Figure 3), about half of the elderly are healthy and have no underlying diseases, while the other common chronic diseases include hypertension, diabetes, stroke and coronary heart disease. Among the elderly with chronic diseases, 12 are hereditary. Therefore, the elderly still have an urgent need for medical care facilities in the community. Even the healthy elderly also need regular physical examination to maintain health and prevent diseases.Third, social needs. Similarly, when the data was obtained from the questionnaire survey, 300 questionnaires were distributed to the elderly over 50 years old, of which 282 were valid questionnaires and 18 were invalid questionnaires. According to Figure 4, the daily entertainment forms of the elderly are rich and colorful, among which the top three are chess and card activities, exercise activities, square dancing, followed by health knowledge lectures. It can be seen that various forms of social activities are deeply loved by the elderly group.

After analyzing the behavior characteristics and needs of the elderly, it can be basically determined that the aging adaptation transformation of community public facilities mainly focuses on the functional transformation and optimization of medical care facilities, sports equipment facilities and social entertainment facilities.

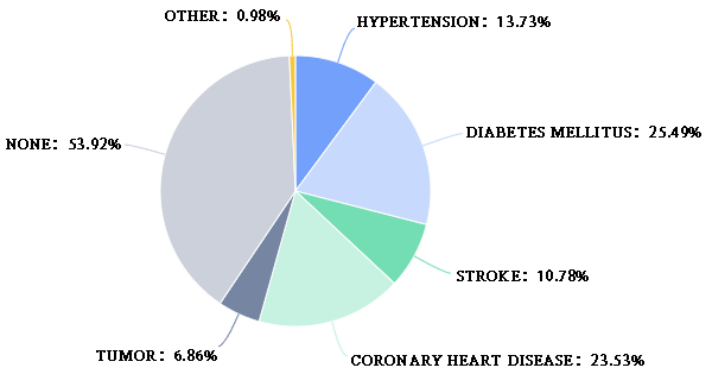


Fig.3 Elderly Chronic Condition Data

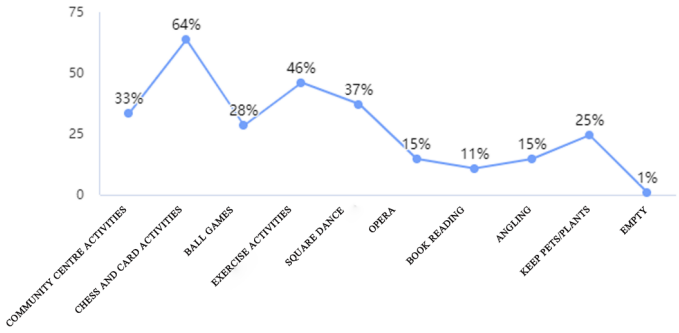


Fig.4 Data analysis of entertainment methods for the elderly

3 Strategies for the Reconstruction of Aging Public Facilities un-

der the Concept of Healthy Community

3.1 Rehabilitation of medical and nursing facilities

At present, the medical care facilities in the community are mainly community medical service centers and service stations.However, for old communities, the basic medical care facilities are not perfect, which makes it more difficult for the elderly to see a doctor or check their health. Therefore, they can only choose private clinics or other communities with medical care centers within the vicinity, which has a certain adverse impact on their health. In view of this situation, some primary medical services can be decentralized to the community, which is conducive to alleviating the "difficult to see a doctor" and other problems.

First, set up some "medical stations" similar to Cainiao Station in fixed points of the community, mainly for public welfare.The staff of a post station varies from 1 to 2 people, providing daily examination and consultation services, and can also popularize health knowledge and disease prevention lectures to the elderly regularly or in their spare time, and deal with some accidents such as traumatic injuries in the daily life of community residents.At the same time, some elderly people with psychological disorders are also counselled.

Second, mobile medical service stations should be set up in communities with relatively few elderly people to effectively avoid waste of resources,limited resources are used to serve more people, a fixed date or time period is set to visit and see a doctor in the corresponding community, the condition of the elderly is recorded, and the docking between different medical personnel is facilitated.During the epidemic control period, they can also visit the communities in their responsible areas to carry out relevant routine examinations on the elderly, so as to avoid suppressing the basic medical care needs of the elderly during the epidemic control period,It can also be combined with the medical post station, which can help to share the work when the workload of the medical post station is large, and can also send some staff to participate in the work of mobile medical service when the medical post station is idle.

3.2 Renovation of sports fitness facilities

There are three major problems in community sports and fitness facilities: First, the location of facilities is not clear, which makes it difficult to meet the needs of most people in the community, and the form of facilities is relatively single and unattractive.Second, the lack of suitable aging configuration, the lack of security measures for the elderly.Third, lax management, facilities placed in the open air, resulting in rust, loosening, parts fall and other conditions, seriously affecting the safety of facilities.

The renovation of fitness facilities for aging should focus on improving the physical condition of the elderly, and design different sports facilities according to different basic diseases.For example, the elderly with diabetes mellitus need exercise more, which can improve their health and health through exercise, while the patients with coronary heart disease have relatively less demand for exercise. Therefore, the exercise demand and intensity are different between the elderly with different constitutions and different basic diseases, so the design process can be improved in a divided way.In addition, it is necessary to warm up before exercise, so this series of facilities can be combined. The amount of exercise is arranged in sequence from small to large. The use order is marked on the surface of the facilities. The warm-up shall be fully carried out during the process of use, so as to avoid the injury caused by insufficient warm-up of the elderly during exercise, and the elderly with different physique can also choose appropriate sports equipment.

3.3 Renovation of social and entertainment facilities

Cultivate the health awareness of the elderly, enable the elderly to participate in more recreational activities through social and recreational activities, and help the elderly to go out. According to statistical data, the two reasons for the elderly to stay in community public activity areas account for the highest proportion, respectively, 35% and 27%[4].Therefore, developing the functions of community public activity area (outdoor stage, chess and card pavilion, medical post station, etc.) and organizing corresponding activities and competitions can provide a good opportunity for the elderly to get acquainted with each other and enhance their sense of belonging.Certain awards and rewards can also be set for entertainment activities (square dance, chess and card entertainment, knowledge lectures, etc.) that the elderly are interested in, so as to stimulate the vitality of the elderly and enrich their lives.

4 Analysis on the Transformation of Aging Public Facilities under the Concept of Healthy Community

4.1 Analysis on the transformation of medical and nursing facilities

As shown in Figure 5, the reconstruction of medical care facilities mainly includes two ideas: adding medical post stations and mobile service stations.They correspond to different time ranges and use fields, and there is no strict distinction between them.On the contrary, in the face of some complex tasks (such as the current epidemic period), the personnel of the two stations can communicate and cooperate with each other, share data, realize the full coverage of basic community health service facilities, enable the elderly group to enjoy convenient medical services, and realize the basic principle and ultimate goal of the aging layout of community health service facilities [6].

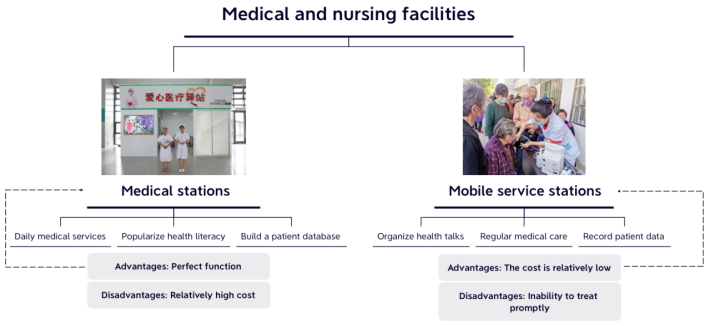


Fig.5 Medical and nursing facilities design ideas

4.2 Analysis on the Renovation of Sports Fitness Facilities

As shown in Figure 6, the transformation of sports fitness facilities mainly starts from two aspects: physical function training and rehabilitation training.The exercise mode with corresponding intensity is provided for the elderly with different physical conditions, and the exercise and fitness facilities can integrate the emphasis of corresponding body areas and strengthen the pertinence.At the same time, improve the status quo of un-

clear positioning groups and low utilization rate of sports fitness facilities, and build a healthy physical environment.



Fig.6 Sports and fitness facilities design ideas

4.3 Analysis on the Transformation of Social Entertainment Facilities

As shown in Figure 7, the transformation of social entertainment facilities mainly focuses on developing the functions of public areas and organizing relevant activities.The two complement each other, providing a platform for social interaction among the elderly groups, increasing the probability of their participation in social activities, and also enabling the elderly participating in it to have a sense of collective belonging, which not only enriches their spare time but also makes friends, which is helpful for the physical and mental health of the elderly.so that the old people can enjoy the pleasure of life in the social entertainment and accelerate the realization of the goal of a healthy humanistic environment.



Fig.7 Social entertainment design ideas

5 Conclusion

With the continuous development of the times and lifestyle, people pay more and more attention to health.. Therefore, this topic will be healthy community concept and public facilities suitable for aging combined,According to the concept of healthy community and the elderly's demand for a healthy life, the paper studies the medical care facilities, sports and fitness facilities, social entertainment facilities.At present, the research

on the health of public facilities is still in the rising stage, which needs further refinement and analysis. The transformation is only aimed at the elderly who have their own ability to act, and the research conclusion is one-sided to a certain extent.In future research, we should pay more attention to semi-nursing care and nursing care of the elderly on the basis of deepening the concept of healthy community, conduct more systematic research on different elderly groups, constantly improve relevant facilities, enhance the convenience of life of the elderly, so as to realize the beautiful vision described in "2030 Healthy China" as soon as possible.

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