

Comprehensive Evaluation of the Effectiveness of the Construction of Old-age Facilities in Urban Institutions in Gusu District, Suzhou City

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Abstract. The increasingly severe aging trend challenges the old-age service system in China. As a component of the social old-age facilities, the urban institutions of old-age facilities play an indispensable role in the rational allocation of social old-age resources. Therefore, it is particularly important to establish a comprehensive and systematic evaluation index system of urban institutional pension facilities and comprehensively evaluate the construction effect. In this study, planning, space layout equivalence index reached degrees, stakeholder satisfaction as evaluation criterion, determining city institutions endowment facilities construction effectiveness evaluation framework and index system, secondly in Suzhou gusu area, for example on empirical research and put forward the corresponding strategies, so as to our country endowment services offer reference for development of high quality.

Keywords: Institutional pension facilities; Achievements in construction; Equalization of spatial layout; Planning index achievement degree; Satisfaction of stakeholders.

1. Introduction

Data from the seventh census shows that in 2020, China's population aged 60 and above will be 264.02 million, accounting for 18.7% of the total population. The increasingly serious aging degree has become the focus of social concern. The current characteristics of China's aging are mainly manifested in (1) high degree of aging and fast average growth rate[1], (2) old age before getting rich, and the speed of social and economic development cannot cope with the current level of aging[2], (3) pension The mismatch between supply and demand of service resources, and the increasingly severe form of elderly care pose challenges to the high-quality development of my country's elderly care service system[3]. At present, my country has gradually formed an elderly care service system that combines home, community, institution, and medical care [4]. The development of the times and the transformation of family structure make the family-supported elderly overwhelmed. become the mainstream model. However, urban institutional elderly care has a series of advantages such as professionalization of services, complete facilities, and standardized service processes, and occupies an important position in my country's elderly care service system [5]. With the continuous attention from all walks of life to urban institutional elderly care, the demand for urban institutional elderly care facilities has also continued to increase, which is particularly important for building performance evaluation. Taking Gusu District of Suzhou City as an example, this study evaluates the effectiveness of its institutional elderly care facilities construction and puts forward relevant countermeasures, so as to provide reference and reference for the development of elderly care undertakings in Suzhou City.

2. Study Design

Since the 1970s, the society has gradually paid attention to the efficiency and quality of the allocation of public service facilities, and has gradually paid attention to the research on the equality and accessibility of space allocation [6,7,8]. In the existing research, foreign scholars mostly focus on the shift from physical space to public participation in public satisfaction evaluation, and the research is relatively simple. At present, the main research directions in China focus on qualitative

research on service quality, countermeasures and public satisfaction [9-12]. The scientific evaluation of the physical space of institutional elderly care facilities has just started, and comprehensive evaluation is particularly lacking. Borrowing the idea of post-implementation evaluation, comprehensively and effectively evaluate urban public facilities from three perspectives: equalization of space layout, degree of achievement of planning indicators, and satisfaction of stakeholders[13].

Equalization of spatial layout means that all citizens receive almost equal access to basic public services in a fair and accessible manner. Based on the research results of relevant scholars, it is determined that the connotation of space layout equalization includes space accessibility and service equality. Among them, spatial accessibility selects the rationality of distribution density and road traffic convenience as evaluation indicators, and service accessibility selects service demand satisfaction and service capability accessibility as evaluation indicators.

At present, the indicator to measure the achievement degree of urban institutional elderly care facilities is the bed allocation target. Combined with the principles of availability and scientificity, the number of beds available to thousands of elderly people, the proportion of non-profit elderly care beds, and the occupancy rate of institutional elderly care facilities are selected as evaluation indicators.

This study selects three stakeholders directly related to institutional elderly care facilities: occupancy of the elderly, including three methods: physical space, service content, and managerial level satisfaction; institutional managers include government assistance, social participation, and satisfaction with charging standards. The third party includes three aspects: information contact, service management, and opinion evaluation satisfaction.

3. Evaluation results

3.1 Current Situation of Institutional Pension Construction in Gusu District, Suzhou City

At present, the elderly population in Gusu District of Suzhou City has reached 227,500, which shows the characteristics of a large total elderly population, a fast level growth rate, and an increase in the level of aging. Combining Figure 1 and Figure 2, it can be seen that the 27 elderly care institutions in Gusu District are distributed in the central urban area and the central and southern areas. The central urban area is relatively concentrated, while the northern and southern urban areas are sparsely distributed, and the more outward the distribution, the more divergent.

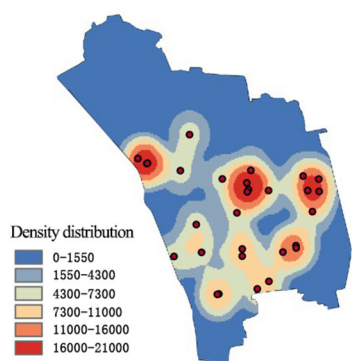


Fig. 1 Spatial core density distribution of elderly care institutions in Gusu District

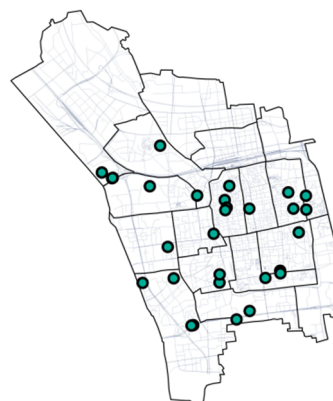


Fig. 2 Spatial distribution of elderly care institutions in Gusu District

3.2 Equalization evaluation of institutional pension space in Gusu District, Suzhou City

3.2.1 Traffic Convenience

Based on the 10-minute walking ability of the elderly, a radius of 800m was selected and analyzed by space syntax. From Figure 3 to Figure 6, it can be seen that the southeast region has the highest crossing vitality, followed by the northwest region and the central old urban area. The actual global

integration is better than the ideal global traversal activity potential map. At the same time, combined with the shortest path of the residential area of the elderly care institutions in Gusu District, it reflects the degree of transportation convenience of the elderly care institutions, which matches the overall integration degree map of Gusu District. The central and eastern areas have higher transportation convenience, while the northern and western areas are less convenient. . It basically meets the transportation needs of the attachments of institutional elderly care facilities.



Fig. 3 Potential map of global crossing activities in Gusu District R=n

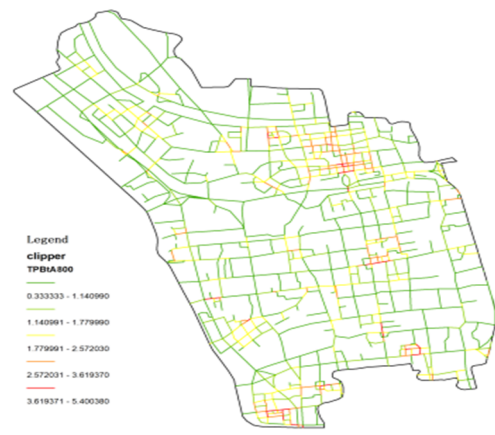


Fig. 4 Local crossing activity potential map in Gusu District R=800m



Fig. 5 Global integration degree map of Gusu District R=n

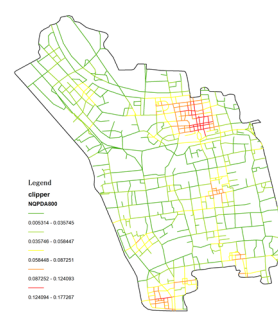


Fig. 6 Local integration degree map of Gusu District R=800m

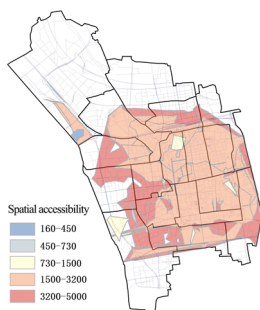


Fig. 7 Spatial accessibility of elderly care institutions in Gusu District

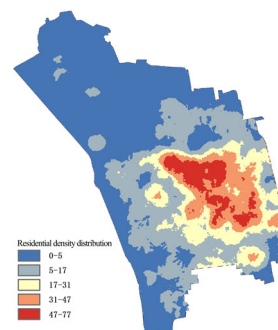


Fig. 8 Distribution core density of residential areas in Gusu District

3.2.2 Space reachable range

It can be seen from Figure 7 that the 5-kilometer space accessibility of the old-age care institutions in Gusu District cannot completely cover the Gusu area, and a few areas in the north and south cannot

reach the old-age care institutions within 5 kilometers nearby. However, the accessibility of elderly care institutions should be combined with the distribution of residential areas. Therefore, compared with the core density distribution of residential areas in Figure 8, only a small part of the southwest of the urban area cannot be spatially covered by the 5-kilometer space of nearby elderly care institutions. At the same time, combined with the core density distribution map of residential areas in Gusu District, it can be seen that the reachable range of 3 kilometers of institutional elderly care facilities in Gusu District basically covers the high-density residential areas in the southeast.

3.2.3 Service Availability

From Figure 9 and Figure 10, it can be seen that the elderly population in Gusu District is mainly distributed around the central urban area and the northern area, which is consistent with the theoretical population. There is also a certain gap in the demand population.

Figure 11 shows the spatial distribution of the path distance from residential communities to elderly care institutions. The shortest paths to elderly care institutions are concentrated in the central and southeastern parts of Gusu District, while there are some communities in the northern and western parts of Gusu District that cannot obtain services from elderly care institutions. The areas with the highest service accessibility are concentrated in the southeast. Service accessibility scores are lower in most areas on the north and south ends (Figure 12).

3.3 Evaluation of the achievement degree of institutional pension planning indicators in Gusu District, Suzhou City

According to the Suzhou 2020 Statistical Yearbook, the elderly population in Gusu District is 227,525. According to the data of elderly care institutions provided by the website of the Suzhou Ministry of Civil Affairs, the number of beds provided is 4,410. The calculated number of beds for every 1,000 elderly people is about 20, which is quite different from the 45 standards required in the summary of revision opinions in the "13th Five-Year Plan for the Development of Suzhou Aging and Elderly Service Industry (Draft for Comment)".

there are four private institutions in the elderly care institutions in Gusu District, Suzhou City, with 280 beds in Suzhou Shencheng Nursing Home and Suzhou Fuxing Silver. There are 40 old-age apartment management Co., Ltd., 80 Suzhou Cileyuan Nursing Home Management Co., Ltd., 150 Suzhou Fuyuan Nursing Home, and a total of 550 for-profit nursing beds, accounting for 12.47% of the total beds. The ratio of non-profit beds operated by the government is 87.53%, the proportion should not exceed 50% in the "13th Five-Year Plan", but the proportion of non-profit pension beds is more than 50%, and the middle and low-income seniors can obtain more affordable pensions bed.

According to relevant websites such as ChainLao.com, Nursing World and other related websites, combined with field visits and investigations, The total number of beds in Gusu District is 4,410, with a total of 2,425 elderly people staying, and the overall occupancy rate is 55%, basically meet the standard.

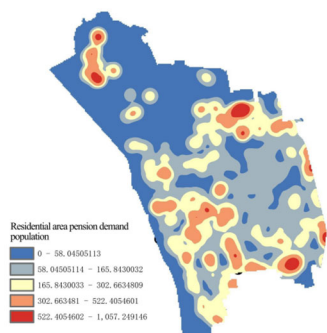


Fig. 9 The core density distribution of the population in the residential area in Gusu District

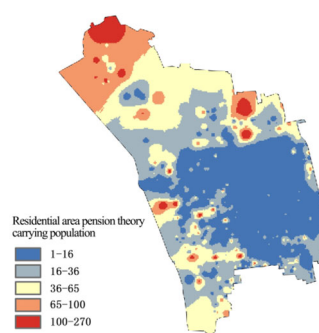


Fig. 10 Spatial distribution of theoretically carrying population of elderly care institutions in Gusu District

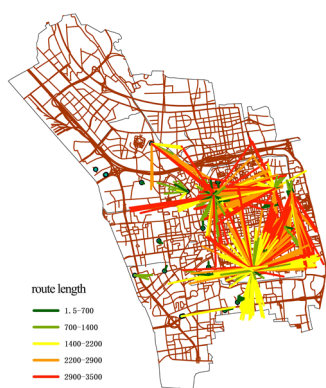


Fig. 11 Cost distance between retirement institutions and residential communities

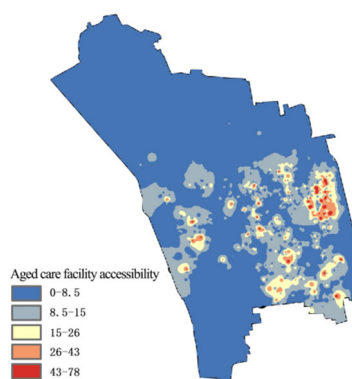


Fig. 12 Service accessibility score of elderly care institutions in Gusu District

3.4 Stakeholder Satisfaction

By combing and summarizing the relevant literature evaluation index system of stakeholders, considering the physical factors of the elderly, this satisfaction survey questionnaire is mostly interview type, and a total of valid information and data has been obtained. There were 394 questionnaires on personal satisfaction, 85 by institutional managers, and 40 by third parties, for a total of 519 questionnaires. According to the weight and evaluation rules, the satisfaction is scored. From Figure 13, it can be seen that the satisfaction of institutional elderly care facilities in the southern area is higher than that in the north. The satisfaction of institutional elderly care facilities in the central urban area is low. According to field research and investigation, the construction years of elderly care institutions in the north are generally higher than those in the south, and the elderly care facilities in institutions are seriously outdated.

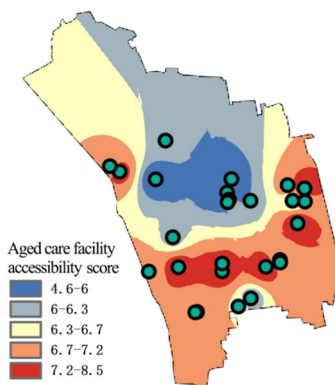


Fig. 13 Satisfaction distribution of elderly care institutions in Gusu District

3.5 Analysis of the evaluation results of the construction of institutional elderly care facilities in Gusu District, Suzhou City

The level of spatial distribution of institutional elderly care facilities in Gusu District, Suzhou City is generally high, but there are still service blind spots. In terms of spatial accessibility, the spatial accessibility of the northern and southern regions is lower than that of the central region, while in terms of the distribution of demanded population and theoretically carrying population, the southwestern fringe region can theoretically provide more institutional elderly care services. The overall presentation demand and distribution status do not match supply and demand.

The overall indicators of institutional elderly care facilities are well completed. Although there are about 20 beds per 1,000 elderly people, there is a big gap with the existing standard requirements.

The number of non-profit old-age beds accounted for 87.53%, which was far greater than 50%, meeting social welfare requirements. The overall occupancy rate of institutional elderly care facilities is 55%, which meets the highest level in the evaluation standards for elderly care institutions. However, the overall occupancy rate is not high, and the overall distribution of elderly care institutions is uneven.

According to the analysis of the results of the survey questionnaire, all stakeholders of the old-age care institutions in Gusu District scored above 4 points, and the overall satisfaction was good. Among the 27 elderly care institutions in Gusu District, there are 17 elderly care institutions with average stakeholder satisfaction, and 10 elderly care institutions with high stakeholder satisfaction.

The elderly who live in are generally satisfied with the physical space, service content and management level. The overall satisfaction of institutional managers with government subsidies is average, among which private enterprises are less satisfied than government subsidies, and have a higher demand for policy support. In the survey and data collection, it is found that social organizations and volunteer activities basically meet the operational needs of elderly care institutions, but institutional managers are less satisfied with social charitable donations, and more satisfied with social organizations and volunteer activities.

The third parties concerned with staying in the elderly are basically satisfied with the charging standards of various elderly care institutions in Gusu District, and the overall service quality of private institutions is better than that of public institutions. They are basically satisfied with the information management. The managers of the elderly care institutions can properly keep the relevant information of the elderly and third parties, but there is a phenomenon that the personal information of the elderly is leaked. Satisfaction with communication is high, but some elderly residents are not visited for a long time. The third-party related to the elderly staying in the elderly is highly satisfied with the evaluation, and they can basically make the complaint information public and deal with it in a timely manner. At the same time, they are regularly inspected by third parties and other organizations, and the management is orderly. The third-party opinion of private elderly care institutions evaluates satisfaction Slightly higher than public pension institutions.

4. Conclusion

Based on the evaluation framework of space equalization, the degree of achievement of planning indicators, and the satisfaction of stakeholders, this study focuses on the evaluation of the effectiveness of institutional elderly care construction in Gusu District, Suzhou City, which has certain reference significance for the development of urban elderly care. The results show that the overall effect of institutional pension construction in Suzhou is good, but there is a relatively unreasonable state. In terms of spatial distribution, the overall distribution is less balanced, the stakeholders are generally satisfied, and some details need to be resolved urgently. According to the evaluation results, targeted policies are proposed: 1) Pay attention to the government's planning and guidance for the construction of institutional elderly care facilities; 2) Increase support for private elderly care institutions; 3) Improve the government's preferential policies for elderly care institutions.

Due to the late start of domestic institutional pensions, the relevant data are relatively lacking, and the acquisition of evaluation indicators is also relatively one-sided. In the future, the comprehensive evaluation of the performance of urban institutions for the elderly should pay more attention to the collection and acquisition of data, and pay attention to the systematic and scientific evaluation indicators and evaluation methods.

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