

Research on the Current Situation and Policy Optimization of Smart Home-Based Care Model: Take Yunhe District as an Example

Chengze Du^{1,†}, Wenting Jiang^{2,†}, Weijia Wu^{3,†} and Siyu Yao^{4,†}

¹*Faculty of Humanities and Law, Hebei University of Technology, Tianjin 300000, CN*

²*College of International Business, Innovation and Entrepreneurship, Zhejiang International Studies University, Hangzhou 310000, CN*

³*School of Public Finance and Administration, Tianjin University of Finance and Economics, Tianjin 300222, CN*

⁴*Faculty of Humanities and Social Sciences, Xi'an Jiaotong University, Xi'an 710049, CN
2206124242@stu.xjtu.edu.cn*

†These authors contributed equally.

Abstract: At the beginning of the 21st century, with the deepening the increasing degree of aging, it has become a major problem to solve the problem of solving the elderly to support and rely on. The research topic of this paper is the current situation and policy optimization of the home-based care model in Cangzhou city. This paper mainly uses the method of case analysis to analyze and study the home-based care service model of Cangzhou Yunhe District, and master the home-based care status of Cangzhou Yunhe District through a questionnaire survey. The study found that Yunhe District of Cangzhou city actively promotes home-based care services and provides professional services for the elderly, but it is still in the early stage of development, and there are problems such as pension care policies and the mismatch of resource allocation. Therefore, it is necessary to promote home-based care as a whole, meet heterogeneous social needs, and promote the development of home-based care services in Yunhe District, Cangzhou City.

Keywords: population aging, home-based care, pension service system, social service

1. Introduction

China has the largest elderly population in the world. Since China entered the aging society in the early 21st century, the aging degree has become increasingly serious. At the same time, subject to the economic development and the reasons for the large population base, the level of Chinese pension service can not match the demand for pensions, and there is an unbalanced and inadequate contradiction, and the society and government are also paying more and more attention to this problem. Now our country most older people would choose the form of a family endowment, which can make old people never leave home can enjoy the life care from family or community, catering to the psychological needs of the elderly, and is good for them to spend their twilight years, formed a kind of high efficiency, accord with national conditions, social status and economic condition of the new pension service model.

Home-based old-age care refers to a socialized old-age care service that takes family as the core, community as the support, and professional services as the support, providing daily care, medical care, spiritual comfort, and solving difficulties in daily life for the elderly living at home. The most prominent feature of home-based care is convenience and comfort. Some Western countries had entered the aging age as early as the 1950s and had begun to think about implementing the "de-institutionalized" pension mode at that time, which originated from welfare pluralism. The main point of interaction theory is that the interaction between individuals and the environment and their interaction will have an impact on the elderly society, so it proposes to improve the quality of the environment and enhance the satisfaction of the elderly [1]. According to activity theory, the elderly should actively participate in community activities in home-based care, which can improve self-cognition and realize self-value. Social embeddedness theory holds that each member is dependent on the social structure and social relations, and when applied to home-based care, the elderly cannot be separated from social life and should continue to be socialized.

This paper mainly adopts the case analysis method to analyze and study the smart home-based care service model of Yunhe District in Cangzhou City. This paper discusses the research background and significance of the home-based care model in Yunhe District of Cangzhou City and specifically introduces the smart home-based care model in Yunhe District of Cangzhou City, expounding the specific operation mechanism, and putting forward suggestions for promoting home-based care adjustment based on this, to summarize and prospect the home-based care model. This study can improve the related research on home-based care services to a certain extent and provide important theoretical references for enriching the home-based care service model [2]. As a new type of elderly care service model, smart home-based care service highlights the new wisdom, new plans, and new actions of China's supply-side structural reform of elderly care service, which has important practical significance for the development of smart home-based care service.

2. Case Restoration: Current Situation of Home-based Elderly Care in Yunhe District

Yunhe District, subordinate to Cangzhou City, Hebei Province, is also the seat of the Cangzhou City government because the Beijing-Hangzhou Grand Yunhe runs through the whole City named. Located in the west of Cangzhou City, the Yunhe District covers a district of 117.7 square kilometers. It has jurisdiction over 2 towns, 6 sub-district offices, 63 administrative villages, and 51 communities. According to the seventh census data, as of midnight on November 1, 2020, the permanent population of the Yunhe River district was 511,086, with the elderly aged over 60 accounting for 14.48 percent.

At present, Cangzhou City Yunhe District adopts a new home-based care model. By establishing an online home-based care platform, Cangzhou City cooperates with domestic service, medical care companies, and other service institutions to connect and provide services to the elderly through smart wearable devices. The service platform is self-financed by the Green Homeland home-based care Service Center of Yunhe District, Cangzhou City, and subsidized by the government [3]. By accessing smart wearable devices, the platform can grasp the health status of the elderly in real-time. The elderly can also call the service center through smart wearable devices to enjoy comprehensive home-based care services. At present, more than 3,000 elderly people in Yunhe District have been equipped with smart wearable devices. Relying on the information platform, the elderly can enjoy all-weather smart elderly care services. The elderly can call the appointment service personnel to provide on-site services through the "one-click" device and settle the service fee by swiping the elderly card. According to the service center, it receives an average of 300 calls a day. At the same time, government departments can rely on all kinds of data collected by the platform to accurately grasp the elderly care service needs of different Districts, different ages, and different levels [4], and

provide detailed data support for the government to accurately deliver elderly care service resources [5].

In 2022, the Yunhe district will build a Fu'an home-based care center for the elderly, and actively explore a new model of home care, uniting with the Cangzhou central hospital's health care group. The government jointly with Cangzhou Central Hospital Health Care Group, focused on building a Fu'an home care center for the elderly and opening the first tertiary hospital in the province to carry out health care workers in the community [6].

Yunhe District raises 5 million yuan to provide professional housekeeping and medical care services for the elderly through government purchasing services. According to the Implementation Measures of home-based care Services issued by Yunhe District, the elderly over 80 years old, the elderly over 60 years old with five guarantees, three no elderly, the elderly who have lost their only child, people over 60 years old with subsistence allowance, key entitled groups, and those who are mentally disabled, disabled, severely disabled, have empty nests or only have severely disabled children living with them can enjoy home-based care services of 100 yuan to 200 yuan per person per month [7]. Already, more than 3,000 seniors hold cards and enjoy home-based care services provided by the government. By the end of August 2022, a total of 9,540 elderly people had joined the network in the Yunhe District, including 6,913 online elderly people. A total of 36,865,700 yuan of home-based care service subsidies had been paid to the online elderly, and the elderly had enjoyed various home-based care services 460,800 times. The total service amount was 4.12 million yuan, benefiting 6,913 elderly people. The total service amount was more than 46,000 times, and the service consumption amount was more than 3680,000 yuan [8].

Although, Cangzhou City Yunhe District has made important efforts in home-based care and has achieved a series of effective results. however, with the development of time, some problems have also been exposed, specifically reflected as follows:

2.1. Lack of Coverage

The coverage of the smart home-based care platform is still not comprehensive enough. Platform users although there has been a certain scale, according to the results of the questionnaire shows that there is still a considerable part of the old man heard of similar services or not operating the equipment, this leads to the platform does not cover all the elderly, There are still some elderly people who do not enjoy the services of home-based care only.

2.2. The Existing Configuration does not Match the Actual Requirements

There is a mismatch between the supply and demand of community home-based care services. With the enrichment of material life, the elderly not only need material help but also need spiritual help^[5]. According to the results of the questionnaire, 37.5% of the elderly need cultural and recreational help, and 61.36% of the elderly need spiritual comfort. But the home-based care services in Yunhe district mainly focus on daily life services and spiritual and cultural services.

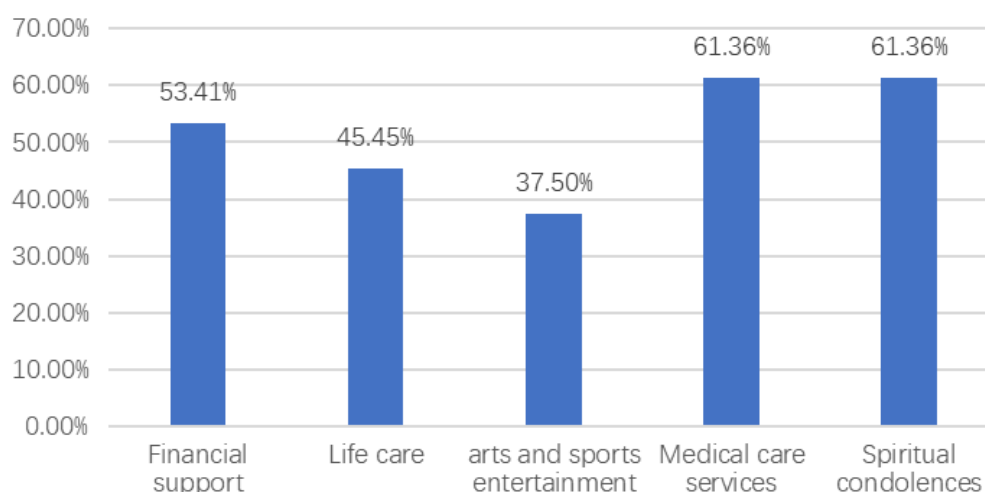


Figure 1: Old persons want services provided by society.

2.3. Pension Service Policies Lag Behind the Old

The policy support of community home-based care services is insufficient. Although in recent years the government increased the support policy support, the pension services policy still lags behind the social and economic development, the main manifestations are: First, the basic security level of the elderly still needs to be improved, and second, there is still a lack of service facilities. Although older daycare centers and the number of rural school happiness growth is obvious, as a result of running mechanism problems and insufficient government subsidies play a limited role.

2.4. Lack of Interaction Among Staff

Did not give full play to the role of community volunteers, more dependent on community workers. The relationship between community volunteers and social workers and service objects, service agencies, and the community are loose and not strong. As a result, community workers need to undertake more work tasks, which affects the quality and efficiency of home-based care services to a certain extent.^[5]

3. Inner Logic of Smart Elderly Care in Yunhe District

3.1. Meet Heterogeneous Social Needs

The in-depth construction of wisdom provides diversified and multi-level service needs for the elderly, and registers and enters various services into the information system synchronously. Looking forward to advanced regions, whether it is upgrading set-top boxes or distributing smart wearable devices, sufficient financial support is inevitably needed as a necessary guarantee for the implementation of policies [9]. The Yunhe district also has a policy of providing home-based care services at different prices for the elderly over a certain age or special groups within its jurisdiction. Based on reality, the government should consider the economic cost of intelligent pension, try to help retirees realize social relief, avoid excessive economic burden on retirees and their children, and make policy optimization truly benefit the people.

3.2. Promoting Home-based Care

Cangzhou city government strategy to "let the elderly have a happy old age" as their pension policy clear goals, actively promote endowment service by Yunhe district "key fill a vacancy type" to "moderate pratt & whitney type", by quoting the daycare service center ", a + life care "model for demonstration lead, relying on the central hospital Kang group, Through the tripartite cooperation of "community + society + medical care", we have built two pilot projects of quality transformation of elderly care in old communities, namely unity Community and Garden community, and made efforts to build high-quality community daycare service centers such as Xining Road. home-based care as a part of the promotion of the current pension model, the importance of promoting the achievement of strategic goals is very important [9]. In recent years, in the case of breakthroughs in home-based care services, the next step will be to build a Yunhe-characteristic elderly care community, carry out the combination of medical and nursing care, and actively explore the establishment of a new mode of cooperation with Cangzhou Central Hospital Medical Group.

3.3. Pay Attention to Spiritual Construction

Yunhe district often older people use "than children close" the way to reflect the wisdom that occupies the home endowment service attitude of enthusiasm thoughtful but combined with the questionnaire data, it also reflects the side endowment the old man to a certain extent, the lack of child care, therefore, the intelligent home endowment should actively promote the livelihood of the people for the construction of complex, more when the well-being of the masses to the community as a starting point, By building smart communities to provide convenience for community people, to accelerate the construction of harmonious communities and promote regional social progress. Create a people-oriented intelligent management system to make people's work and life more convenient, comfortable, and efficient. Create a happy, harmonious, and beautiful intelligent home care model.

3.4. Digitization of Home-based Care

Promote and deepen the construction of smart healthcare and digitalization, and take the road of the Internet of Things and cloud computing to "smart community" and "smart city". Cangzhou policy can also be combined with its situation, through the application of information platforms, wearable smart bracelet data, etc., to timely know the home health status of the elderly. In addition to teaching the elderly how to use relevant equipment, the objective factors of their age should also be taken into account to reduce the resistance of the elderly to accept the services of the smart old-age care project [10]. For example, the opening procedure of smart home-based care registration is simplified, the steps of use are reduced, the difficulty of use is lowered, the threshold of operation is lowered, the APP software program is optimized, and the elderly friendliness of related Internet products is constantly improved. For example, in the interview survey of Minhang District, respondents said that the district advocated increasing age-appropriate design and humanized service facilities, and setting memory boards, elastic floors, and inactivity monitors to optimize the user experience of the elderly [10].

3.5. Opinions on Provision for the Aged Adjustment

The main factors forming the home-based care model can be summarized as the following four points: In recent years, China has implemented the national policy of family planning, leading to a decline in the fertility rate. Meanwhile, with the continuous development of the economy, China's medical level continues to improve, and the average life expectancy of the elderly increased. One

only child often needs to bear the pension of two elderly people in addition to the family expenses; 2. Population mobility: there are many empty-nest elderly in rural areas and some cities because their children go to developed areas to work or settle down; 3. Influenced by other foreign concepts or children shirking their responsibilities (a rare phenomenon), the traditional Chinese concept is to raise children for old age, and children need to have the concept of family. 4. The cost of social pension institutions is high, and the elderly are not willing to accept the old institutions.

Sufficient financial support is a necessary guarantee for the implementation of policies. However, the actual conditions of different regions are different. For example, if some regions have good economic conditions, high payment levels of residents, strong willingness to pay, and a preference for high-quality services with higher efficiency through a higher level of expenditure, there is no need to increase excessive financial expenditure. This ratio can be included in other directions to further increase residents' disposable income or to pay home-based care expenses to offset or reduce taxes and other measures to encourage residents to invest their income in smart home-based care services, to promote the further construction and improvement of the smart home-based care model in this region. If some regions have tight fiscal expenditure and more urgent fiscal expenditure needs, they should grasp the principal contradiction and slow down the increase of this proportion of expenditure, so as not to affect the solution of the main economic and social problems in the region [11]. If local finance has sufficient strength and pension for the economic and social development of the key breakthrough areas, the government can consider promoting the economic cost of wisdom endowment, help old age pensioners realize socialization relief, as far as possible to avoid old age pensioners caused heavy economic burden, and their children or wisdom that occupy the home pension problem for the development of stagnation, make policy optimization achieve accurate and efficient [11].

The process of pilot construction of a complete system needs a clear plan and a long time as the pilot condition. For the areas that initially promote home-based care, the key content of the work is to establish clear short-term goals and build the implementation system of relevant work, and recruit talents. For the areas with good pilot conditions of smart home-based care, it is particularly important to learn from the strategic planning of Min Hang District in Shanghai in terms of old-age care, improve the work system, and make a relatively clear strategic planning with specific steps; For areas that have successfully promoted the practice of smart home-based care in a large area, more advanced models such as improving the supervision system and supervision mode, exploring and building communities have been transformed into the main content of their work.

To promote and deepen smart healthcare and digital construction, and to take the road from the Internet of Things and cloud computing to smart communities and cities, it is necessary to consider the local economic construction and a basic level of scientific research [12]. Such as the local part of the Internet of things in the field of construction has begun to take effect, the local frontier science and technology enterprises have mastered the related basic data or the local leading research and development of scientific research in colleges and universities, the government can and related enterprises, units, universities and research institutes to cooperate to outsourcing, according to the construction of maximizing the advantage, avoid the lack of talent and technology results in the stagnation of the promotion or construction; however, if the local economic construction is lagging and infrastructure conditions are poor, preferential policies or other advantages can be given priority to attract talent inflow from developed areas, apply for fund subsidies from the national finance to improve the level of infrastructure, and vigorously develop their advantages to drive the development of the pension industry [12]. First, we will complete the preliminary preparation conditions for the construction of smart home-based care and then seek further improvement. Promoting the construction of digital application scenarios such as Hangzhou lake the strengthening, effective docking the old man's demand, according to the pension policy, service facilities layout, such as intelligent

analysis, accurate matching, push service, help the elderly into the digital society, make the people's livelihood complex training room, in the course of the elderly in the digital reform experience and service.

And spiritual ascension and wisdom of the construction of the lower house threshold, no matter for intelligent house construction into what a country or region, focusing on the old age pensioners spiritual construction and mood swings, simplify and optimize the family endowment service program is a certain adjustment space, is a more general improvement measure.

4. Conclusion

According to the survey results, there is still a lot of development space for home-based care in Yunhe District of Cangzhou City, and the development level of the elderly care service in this area is still unable to match the actual demand. Throughout the development of home-based care in Yunhe District, Cangzhou City, there are mainly the following problems: Wisdom accepted concept of pension for the elderly hard, existing configuration is inconsistent with actual demand, pension service lagging policy innovation and the problem such as the lack of correlation between staff, this paper puts forward some constructive Suggestions to solve above problems, but because the research level, energy, and space are limited, the problem such as the difficulty of data collection, As a result, there are still many deficiencies in the systematic, perfect and deep level of the research design. Affected by the epidemic, this study mainly focuses on the Yunhe area and mainly uses questionnaires. It lacks in-depth communication and offline field visits with retirees, home-based care staff, children of retirees, policymakers and implementation departments, etc. In the in-depth research, the team investigated by combining online and offline, expanding the scope of the research objects, putting forward more reasonable suggestions from diversified perspectives, and better solving the problems reflected by the research objects. This study by its social role, research experience, my life, the research method of master degree elements such as limit, the results of the study has certain limitations, so we give improved scheme is mainly improve the quality and the professional level, their research team learned predecessors' research experience in their place, so in the face of the object of study can be more diversified, Reflect the problem more accurately. It is also hoped that the problems discussed in this study can be effectively solved in the future of smart home-based care, and the pension model based on the research results can continuously improve the level of grassroots services and social governance, and its operational efficiency and results can also be improved.

References

- [1] Ma Xiao. *Research on the accessibility of urban home-based care services from the perspective of welfare pluralism*. Shandong University(2020).
- [2] Han Fei, Luo Renchao. *Matching between supply and demand of home-based care services in urban communities based on accessibility measurement: A case study of Nanjing*. *Economic geography*, 40 (9), 91-101(2020).
- [3] Dai Shaozhi. *Cangzhou Yunhe District carried out a visit to smart home-based care services*. November 1, 2019. Retrieved on September 17, 2022. Retrieved from: http://he.news.cn/xinwen/2021-11/01/c_1128017020.htm
- [4] Nanhuan Middle Road Street Office. *The South Central Office actively does a good job in the work of home care in 2021*. February 28, 2022. Retrieved on September 17, 2022. Retrieved from: <http://www.czyh.gov.cn/czyh/c116157/202202/029e832f27484d4981a62c8938a6cc21.shtml>
- [5] Yunhe District Park Street Office. *The Park Office focuses on building a home-based Care Daycare Center*. August 22, 2022. Retrieved on September 17, 2022. Retrieved from: <http://www.czyh.gov.cn/czyh/c116223/202208/aa84494daf96405c8df74b5faefb4dff.shtml>
- [6] Yunhe District Park Street Office. *The Park Street Office further improves the level of home-based care services*. November 19, 2021. Retrieved on September 17, 2022. Retrieved from: <http://www.czyh.gov.cn/czyh/c116223/202011/fbf51dafd16a4c0198a931673aea481f.shtml>

- [7] *The District Finance Bureau actively supports the work of home-based care services.* May 16, 2016. Retrieved on September 17, 2022. Retrieved from: <http://www.czyh.gov.cn/czyh/c103810/201605/5d3e390fc0f04df68a11d5c4fa54583e.shtml>
- [8] *The main problems and suggestions for improving the community home-based care service.* August 17, 2019. Retrieved on September 17, 2022. Retrieved from: https://www.sohu.com/a/334342401_100187942
- [9] Liu Xiaomei, Li Hui. *Review and prospect of community home-based care: a biblio-metric analysis based on Citespace.* *Learning and Exploration*, (03):33-40(2022).
- [10] Gu Longfang, Zhu Yifan. *Research on the construction of a standard System of Community care Service in China.* *Standard Science*, (11), 30-34, 42(2015).
- [11] Zhang Ruixin, Chen Guanyu, Yu Jinwen. *"Internet + Pension" subject cooperation: Model framework and thinking approach.* *Jilin university journal of social science*, 21(6), 161-169, 234-235(2021).
- [12] Luo Qi, Wang Anqi, Fan Luodan, Chen Hong, Yu Hua. *Research on the development of home-based care services in China.* *Health soft science*, 33(11), 34-38(2019).