Research on Smart Elderly Service Issues in Xi'an

Siyi Yang

Northwest University of Political Science and Law, Xi'an, Shaanxi, China
2573083806@qq.com

Abstract: *According to the statistics of the seventh national population census, population aging in Xi'an city shows a fast growth rate, and the demand for old-age care is constantly highlighted, and smart old-age care has become an important element of the current old-age care service system. Starting from the holistic perspective of smart aging, the article focuses on the problems of smart aging services by comprehensively analysing the policy, supply and demand levels of smart aging in Xi'an City, and thus proposes to strengthen the top-level design and improve the supervision system at the policy level; to strengthen the cultivation of professional talent teams and increase public investment at the supply level, and to perfect the supply of services; and to improve the information technology level of the elderly at the demand level and to expand the services. The optimisation measures to meet the refined demand are proposed to provide some references for the realisation of the comprehensive smart old-age care in Xi'an.*

Keywords: *ageing; smart ageing; supply and demand of elderly services*

1. Introduction

Xi'an is the capital of Shaanxi Province and the most densely populated area in the province. As of November 2020, the population aged 65 and above in Xi'an was 14,117,727, accounting for 10.90%, an increase of 2.44% compared with the sixth population census. In some areas, such as Lantian County, the proportion has exceeded 16.48%. With the problem of population aging becoming more and more prominent and the demand for senior care services increasing day by day, the development of smart senior care services in Xi'an is imperative. At the same time, due to the improvement of social economy and consumption level, late marriage and late childbearing has become a major trend in the society, which directly leads to the decline of the total birth rate and the increase of the proportion of elderly population in Xi'an City, which brings great pressure and challenges to the supply of elderly services in Xi'an City. Therefore, this paper combs through Xi'an's smart pension policy, analyses the current situation of pension supply and demand, and puts forward relevant suggestions based on the existing problems, which is of practical significance to comprehensively improve the level of Xi'an's pension service.

2. Analysis of the Current Situation of Smart Elderly Care in Xi'an

2.1. Policies on Smart Elderly Service Combining

The policy documents issued by the state one after another show that the state attaches importance to the problem of population aging in China and the urgent need to solve the problem of mismatch between supply and demand of the elderly, and the city of Xi'an has also gradually issued corresponding policies to promote the construction of smart senior care services under the guidance of the relevant national policy documents. As shown in the table 1 below:

Table 1: A compendium of smart ageing policies in Xi'an.

Times	Issuing authority	Name of the document	Thrust
2018.12	General Office of the People's Government of Xi'an	Circular on the Issuance of the Regulation on the Layout of Senior Care Facilities in Xi'an (2018-2030)	Construction of Xi'an Wisdom Elderly Service Information Platform
2019.10	Xi'an Civil Affairs Bureau	Implementation Programme for Building a "15-Minute Nursing Circle" for the Elderly in Urban Communities	Strengthen the "Internet +" pension, promote the "wisdom of old age" Innovative development
2020.01	Xi'an Municipal	Xi'an Smart Community Construction	Development of a comprehensive

	Administration of Big Data Resources, Xi'an Municipal Civil Affairs Bureau	Assessment Standards (2020)	standardised assessment system for smart communities covering six areas
2020.05	Xi'an Civil Affairs Bureau	Regulation on the Promotion of Elderly Services in Xi'an	Xi'an's first local regulations on elderly care services, regulating community-based home care services
2021.11	General Office of the People's Government of Xi'an	Circular of the General Office of the Xi'an Municipal People's Government on the Issuance of an Action Programme to Promote the High-Quality Development of Elderly Services	As soon as possible to make up for the shortcomings of the city's elderly services, and accelerate the upgrading of the level of elderly services
2022.10	General Office of the People's Government of Xi'an	Circular on the Issuance of the Implementation Programme for the Implementation of the Outline of the Plan of Action for the Quality of Science for All (2021-2035)	Promoting the development of a smart ageing industry, focusing on the needs of older persons in using smart technologies and integrating into a smart society, as well as difficulties in social participation and other challenges

2.2. On the supply level of intelligent senior care services

At present, Xi 'an has made certain progress in the smart elderly care service model: a government-led public and private model, that is, the government as the main contributor, allocates a certain amount of operating funds every year for the operation of the elderly care service facility platform, which is responsible for providing the elderly with information consultation, service subscription, government supervision of elderly care services and other public services. For example, the Lianhu District Information Service Center has established a first-level information platform, a second-level service, and a three-level linkage model, but it has not yet built a city-level unified, data-sharing smart elderly care information platform[1]; The second is the PPP model of enterprise operation + government support, that is, the enterprise will independently build and operate, and the government will provide appropriate financial support to create a platform to provide online and offline services for the elderly in the area. For example, the Rui Quan Smart home care Service Center in Beilin District adopts the model of "service center + service site + information platform + distribution service", including hosting, medical services and other services[2]. However, since its establishment, it has only provided food delivery and related medical services, with small scale and single content, and its role has not been fully manifested. Third, the enterprise model with social capital as the support and health management services as the core business, such as Xi 'an Libang Medical Network Technology Co., LTD., the smart watch developed by the company can monitor the physical condition of the elderly and provide timely guidance through the company's network information platform, but it has not been promoted in practice.

According to international standards, the ratio of caregivers to the elderly should be kept at less than one to three, that is, one caregiver corresponds to a maximum of three elderly people, Xi'an's current 35,000 caregiver team corresponds to the city's total elderly population of 1.41 million, a care ratio of as high as 1:40.2. It is evident that Xi'an's elderly care service personnel is far from sufficient, so that the coverage of professional services is insufficient.

2.3. On the demand level of intelligent elderly service

With the continuous development of the Internet and new media, intelligent equipment is extremely widely used in real life. Most of the elderly people in real life have a low acceptance level of the Internet, new media and other new technologies, which makes it difficult for the elderly group to keep pace with the times and lacks social recognition and respect[3]. Shaanxi Quanle Recreation and Nursing Service Centre will be equipped with intelligent health care and rehabilitation equipment such as health all-in-one machine in each community service station to provide chronic disease management, rehabilitation and health care services for the elderly, but the care centre has not yet opened the relevant intelligent equipment use help activities for the elderly, and the elderly are unable to skillfully use the intelligent equipment, which makes it difficult to adapt to the intelligent society, and it is difficult to satisfy the demand for respect.

At present, Xi'an's intelligent pension services do more on physiological needs, for example: Jinbaomei Pension Service Centre, under the support of the Civil Affairs Bureau of the district in which

it is located, adopts the method of "Internet ＋", and establishes Xi'an's first virtual nursing home, which introduces more comprehensive pension services to the elderly, mainly with the help of intelligent products, network information technology, and so on. With the help of intelligent products, network information technology, etc., it introduces more comprehensive pension services to the elderly, so that the elderly can enjoy diversified pension services in their own familiar environment. However, what the intelligent pension needs to solve is not only the demand for material security, but also the need to satisfy the spiritual and cultural needs of the elderly groups.

3. Problems of Smart Elderly Service in Xi'an

3.1. Lack of top-level design

The introduction of national policies and local regulations has guided the development of the smart aging industry, but there is a lack of coordination in the top-level design of policies. The smart elderly industry is under the Department of Civil Affairs, and under the Health Commission, but also under the Department of Industry and Information Technology, but ultimately to solve the problem of old age, the government out of multiple departments leads to unclear responsibilities between departments, the management system is not smooth, resulting in government inefficiency, to the development of the smart elderly industry has brought about an obstacle. At the same time, in the process of policy implementation, there is no real implementation of the policy content, and the lack of relevant supervision system guarantees, resulting in insufficient government implementation.

3.2. Imperfect supply

Among the many majors currently offered by universities in China, there are fewer majors targeting elderly care services compared with majors serving infants and young children such as pre-school education, resulting in a scarcity of professionals in the elderly care industry in Xi'an. Moreover, some of the relevant professionals are unwilling to engage in the elderly care industry due to lower treatment, harder work, lower social recognition and other reasons. Secondly, the personnel in the elderly service industry generally have not undergone professional training, and their cultural level and professionalism are low. As a result, there is a problem of insufficient number of people in the service, low cultural level and insufficient professional level.

According to the data of Xi 'an Civil Affairs Bureau, the application of smart elderly care is still in its infancy. At present, there is no unified smart elderly care information platform at the municipal level. The function of the information platform independently constructed by some districts and counties is not perfect enough to operate independently, and the data exchange and utilization of elderly care services in the city cannot be realized. Moreover, the application rate of various intelligent terminal products in Xi 'an is relatively low compared with other similar cities, such as: Hangzhou government for the elderly to buy and install "caller" or free "health machine" and other terminal equipment has reached 150,000 pieces, Xi 'an City government free to the elderly issued various terminal products according to incomplete statistics of about 4,000 pieces, and Xi 'an local brand - Xi 'an Libang Medical network Technology Co., Ltd. developed the "doctor-patient intelligent machine" and smart watch. More than 3,000 smart all-in-one machines and more than 850,000 watches were sold in the country, but only 800 watches were purchased by Xincheng District Health Bureau in Xi 'an, and the audience was very small[4].

3.3. Needs not effectively met

Due to the fact that the elderly currently receive less digital training, the adaptability of intelligent products is insufficient, and when providing intelligent services for the elderly, they often face problems such as inconvenient use of intelligent products and poor experience, so that the efficiency of intelligent elderly services is not high. In addition, the development of products to meet the high-level spiritual needs of the elderly is insufficient, and there are fewer services that can provide cultural consumption and emotional interaction for the elderly. According to Maslow's hierarchy of needs theory, the needs of respect and self-realisation are also very important, so the mental health and spiritual comfort of the elderly is a content that cannot be ignored in smart ageing, and in the aspect of cultural recreation, the development of Xi'an city's old age learning and old age entertainment has yet to be further improved. Development has to be further improved.

4. Suggestions for Improving Smart Elderly Services in Xi'an

4.1. Policy Level

4.1.1. Strengthening top-level design

A scientific and reasonable smart elderly policy is an important prerequisite for ensuring the benign operation of smart elderly services. In terms of strengthening government functions, the Civil Affairs Department should take the lead in co-ordinating other departments, implementing various smart elderly policies and plans, and forming a co-ordinated development mechanism[5]; on the other hand, the more the scope of the policy at the local level expands, the more diverse and complex the unforeseen factors affecting the policy, and the more likely that the process of implementation of the policy will be disrupted, so it is necessary to make timely adjustments in accordance with the specific conditions of the locality and the changes in the development situation division of labour and the specific provisions of stage-by-stage tasks, so as to solve the problems arising in the actual implementation of the policy in a timely manner.

4.1.2. Improving the Supervision System

As soon as possible, the scope of authority and responsibility should be clarified at the legal level, and the scope of authority and responsibility between the upper and lower levels of the department should be formulated and actively implemented, so as to effectively prevent the avoidance of responsibility and mutual constraints between the implementation of authority[6].

4.2. Supply Level

4.2.1. Strengthen the cultivation of professional talent team

The professional talent team is an important part of the development of smart elderly service, the government and the market play a role, demand-oriented, adhere to the development of talent, cultivate a large number of high-quality smart elderly professional talent team. First, colleges and universities are encouraged to set up relevant majors scientifically and reasonably, such as geriatric care, geriatric product design and marketing, strengthen the curriculum of practical links, and cultivate compound and innovative talents with multiple integrated knowledge structure and ability structure[7]; The second is to establish a sound training system in the field of intelligent elderly care, design training courses according to the results of the demand analysis, increase training efforts, broaden training channels, establish joint training contracts between training institutions and employers, and expand the proportion of excellent talents engaged in the intelligent elderly care service industry to provide quality services.

4.2.2. Increase public investment and improve service supply

The government should support the intelligent service platform for the elderly developed and operated by enterprises, and the third party should evaluate the quality of service and social responsibility, and subsidise the service with awards; in order to encourage the use of intelligent terminals, the municipal and county governments should increase the purchasing power of intelligent products for the elderly, and try to distribute them as much as possible free of charge according to the actual needs of the elderly, and the free objects should be extended to the general elderly groups, so as to cultivate the social atmosphere[8]. And enterprises and social organisations should have a high sense of social responsibility and mission, actively invest in the smart elderly industry, and rely on scientific and technological progress to promote scientific and technological innovation and improve the efficiency of services on the basis of quality and quantity assurance. Eventually, the government, enterprises and social organisations will form an overall synergistic mechanism of multiple subjects to optimise the service supply.

4.3. Demand Level

4.3.1. Improve the level of information technology for the elderly

The government should increase publicity so that everyone has a full understanding of smart elderly care and products. The government should join hands with professional organisations to set up education schools for the elderly, and offer courses on information technology for the elderly in conjunction with their cognitive state, so that the elderly can truly accept smart products from the heart,

master the basic skills of using the Internet, and improve the information technology level of the elderly.

4.3.2. Expanding Service Functions to Meet High-Level Needs

(1) Intelligent Social Services

When the elderly people step into their old age, they often feel lonely, isolated and helpless. Therefore, it is important to build an intelligent social system to participate in various senior activities and meet more friends through the social platform, so as to improve the sense of well-being of the elderly; it is also capable of tracking current social news and conducting open communication with young people through the platform, thus reducing the generation gap with young people, rejuvenating the mentality of the elderly, and meeting the need for social interaction.

(2) Wise Elderly Classroom Service

Opening the classroom to the wise elderly allows capable elderly people to explain and impart relevant knowledge to other elderly people and educate others, while satisfying their own needs for respect[9]; secondly, elderly people can open new courses according to their own interests to showcase their specialties and meet the need for self-fulfilment. By fulfilling high-level needs, it can also effectively alleviate memory loss and improve the self-expression, ability to communicate with others and cognitive ability of the elderly.

Acknowledgment

References

[1] Tong Xiao, Zheng Xianping,Wang Junyong et al. Status quo, dilemmas and countermeasuresfor the development of smart elderly service in China[J]. Health Soft Science,2023,37(07):30-33.

[2] Liu Canyunjun,Li Shuang,Guo Jinyan. Comparative Analysis of Domestic and International Research on Smart Elderly: Topic Selection, Theoretical Differentiation and Methodological Orientation[J]. E-Government,2023(09):90-104.DOI:10.16582/j.cnki.dzzw.2023.09.008.

[3] Zhou Lingyi,Zhou Ning,Zhu Chenlang. Practical Logic and Optimisation Path of Technology-Enabled Wisdom Elderly Service--Taking Shanghai as an Example[J]. E-Government, 2023(02):43-57.DOI:10.16582/j.cnki.dzzw.2023.02.004.

[4] Zhu Xiaofen,Li Zhihong. Comparative study of smart elderly care model in China--Taking Beijing, Shanghai and Wuzhen, Zhejiang as examples[J]. Science and Technology for Development, 2021,17(09):1783-1789.

[5] Wu Xuhong, He Rui,Wu Duo. Two-Way Empowerment: The Way to Crack the "Silver Hair Gap" in the Context of Digital Transformation: A Case Study of "Smart Elderly" Practice in District J of Nanjing[J]. Subgovernment,2022(05):19-30.DOI:10.16582/j.cnki.dzzw.2022.05.003.

[6] Wei Yan,Xu Yun. Dilemma and Path of the Development of Intelligent Healthy Aging Industry--Taking Shaanxi Province[J]. Journal of Xi'an University of Finance and Economics, 2020,33(03):37-45 .DOI:10.19331/j.cnki.jxufe.2020.03.005.

[7] Liang Changyong, Hong Wenjia, Ma Yiming. Global pension: the new development model of new age pension wisdom [J]. Journal of Beijing institute of technology (social science edition), 2022, 24(6):116-124.DOI:10.15918/j.jbitss1009-3370.2022.6126.

[8] Liu Yi, Li Xiaona. Research on the comparison and optimization path of Chinese community smart elderly care model in the digital age [J]. Electronic government affairs, 2022(5):112-124. DOI:10.16582/j.cnki.dzzw.2022.05.011.

[9] Chen Youhua, Shao Wenjun. Smart elderly care: Connotation, dilemma and Suggestions [J]. Jianghuai Forum,2021(2):139-145..