Research on Community Service Smart Endowment Model in Yuexiu District, Guangzhou, Guangdong Province

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Abstract: In this article, in order to solve the problem of the current social endowment, promote economic transformation and sustainable social development in China, by studying the current population aging speed in Yuexiu of Guangzhou in China and the social background of rapid rise of the Internet industry. It combines the advanced Internet informatization technology, intelligent technology and pension industry to innovate on the basis of aged-care at home, institution endowment, forming an “Internet + endowment” wisdom of community service pension mode. By analyzing the relevant data of aging population, this article concludes the feasibility, necessity and practicality of this pension model through describing the current situation of home-based smart pension in Yuexiu District, Guangzhou in China.

Keywords: The Internet; Smart Retirement; Community Endowment; Aging Population

1. Relevant concepts and theoretical basis of community service smart endowment model

1.1 Social background and connotation of community service smart pension model

1.1.1 Social background

Due to the huge China’s population base, the accelerating population aging, and rapid urbanization, our country will be confronted with a peak of aging of the population in the near future. The situation is so serious that our country has to begin to find ways to solve the problem about elderly care. Due to the restriction of social background, the pension problem in China has become more complex. However, the rapid rise of the Internet in China has made great contributions to the development of all walks of life in China, leading to the proposal of “Internet + pension”, a smart pension model. The community service smart pension is an innovation of the community pension model, which enables us to find another way in rather than the traditional pension. The in-depth development of network information technology in the pension industry is conducive to the sustainable development of China’s pension business, as well as the healthy development of China’s economy [1].

1.1.2 Connotation

The community service smart pension model is an innovation among the three current pension models, which combines the advantages of home-based pension and institutional pension. Be different with traditional community endowment patterns, it applies advanced network information technology in community service smart pension industry by using big data and cloud computing technology to receive the elderly health, life needs, combines family, com-
community, endowment enterprise with the old man to provide more diversified and professional services for the aged.

The community service smart pension model will set up the corresponding community endowment agency in each community and corresponding community service smart pension platform. Meanwhile, the home of the elderly will be equipped with the corresponding monitoring equipment, regularly inspecting the elderly pension in the home life and physical condition, and the platform keep in touch with the old man’s family. In case of accident, the community can contact the hospital and family in time. At the same time, monitoring instruments and service platforms used by the community are provided by professional pension enterprises and supervised by the government. The community service smart pension is more suitable for China’s national conditions and traditional pension concept, which is easy to be accepted by the elderly and has great practical value[2].

1.2 The necessity of community service smart pension model in Yuexiu District, Guangzhou City, Guangdong Province

1.2.1 Policy support

The report of the 19th National Congress of the Communist Party of China put forward the requirements of “actively responding to the aging of the population” and “accelerating the development of undertakings and industries for the elderly”. In recent years, in order to adapt to the trend of accelerated aging of the population, the Party and the government have increased their investment in old-age care, attached importance to promoting the development of China’s old-age care industry, and advocated the old-age care industry model with smart home-based old-age care as the main mode and community and institutional old-age care as the auxiliary mode. Through the use of Internet of things, big data and other Internet information technologies, it provides the elderly with more intelligent and humanized health care services, and provides a solution to alleviate the social contradictions of elderly care in China.

1.2.2 Advantages of endowment mode

As one of the old urban areas in Guangzhou, Yuexiu District has a permanent resident population of 1.1638 million[3]. According to statistics, the elderly population is 299,000, accounting for 25.7%. It is one of the urban areas with severe aging in Guangzhou. The proposal of community service smart pension model is conducive to the acceleration of the aging of the population in Yuexiu District to put forward new solutions, alleviate social pension contradictions, promote the combination of the Internet and more industries, create a large number of jobs, and promote the development of the Internet industry. The promotion of this new pension mode nationwide is conducive to promoting the transformation of China’s economy to transfer from traditional industries to high-tech industries, realizing the transformation of the economy to higher-quality development, promoting the transformation of China’s industrial structure, enhancing national welfare, and enhancing people’s happiness. The community service smart pension model enables young people to keep a good balance between work and family, and the elderly can enjoy more professional pension services without leaving home, providing a more effective solution for the development of the pension business.

2. Yuexiu District, Guangzhou City community service smart pension model development status

2.1 Build a “3+X” community service smart pension model

According to data, by the end of 2018, Guangzhou’s population over the age of 60 had reached 1.693 million, accounting for 18.25 percent of the registered population, while the aging rate in Yuexiu, Haizhu and other old urban areas has exceeded 25 percent[4]. For the government, therefore, the construction of “3 + X” wisdom endowment patterns is an important measure to cope with the aging problem. In this mode, community service centers, professional old-age care enterprises and old-age care service institutions collect information through corresponding equipment and use information data platform to monitor, so as to provide more personalized old-age care services for the elderly.

2.2 The first batch of community service smart pension equipment and service implementation application
The first batch of smart old-age care equipment and a series of services were applied in the community, and non-contact vital sign detection instruments were installed free of charge for 5,000 elderly people with special needs. In Yuexiu District, the first batch of family beds for the elderly was set up, and elderly dining halls were set up in Jianshe Street and Baiyun Street. In addition, Eleme online meal delivery platform was also established to provide catering services for 417,700 people.

The first aging bank branch in the city was set up in China Construction Bank, which was called “Leling Harbor” and promoted the use of the upgraded version of Xingguang Pingan Bao, with a total number of 25,000 users in the community. Three embedded old-age care institutions have been built in the community, and 309 new beds for the elderly have been added. The smart old-age care model of community services has been preliminarily implemented.

2.3 The autonomous region shall publicize pilot street measures

2.3.1 Construction Street: Explore the establishment of a “comprehensive medical care service” model

By using the Internet of things, vital signs detection equipment and other information technologies to collect data, explore the establishment of intelligent elderly care and medical care integrated services in Yuexiu District Construction Street. At the same time, in order to better provide services for the elderly group, a perfect health and elderly information management service system is essential. This service system platform needs to combine the community, the elderly and their families, and has the functions of caring for the elderly, contacting children, and paying attention to the needs of the elderly, so as to provide the elderly with health management, dietary habit monitoring and other services online through the remote platform.

2.3.2 Baiyun Street: Creating the service model of “Internet + family doctor”

According to statistics, in the elderly population, diabetes, hypertension, cerebrovascular disease and other elderly accounted for 47%, 11% and 5% respectively from 1993 to 2018. Therefore, in Baiyun Street, Yuexiu District, in order to better meet the health needs of the elderly, the service model of “Internet + family doctor” was created by wearing monitoring equipment and collecting data through information means. The corresponding small program of “family doctor” is set up on WeChat, which can register, make an appointment, see a doctor, check the examination report, consult the online doctor and so on. Meanwhile, according to the situation of most chronic diseases of the elderly, the service package of multiple physical health management is developed to check the physical data through the testing equipment.

Table 1. Composition of chronic diseases among the elderly population in China from 1993 to 2018

- High blood pressure
- Diabetes
- Cerebrovascular disease
- Ischemic heart disease
- Chronic obstructive pulmonary disease
- Other
2.3.3 Agriculture and Forestry Street: Establishing the service mode of “one-stop smart digital community”

Among the three pilot streets, “digital community” was first proposed in Agricultural and Forestry Streets. Due to the relatively perfect development of online government service platform in Guangzhou, it directly laid a good foundation for the establishment of “digital community”. The elderly in Nonglin Street can get to know the detailed rules of Guangdong’s pension policy through the government service platform “Guangdong Province and Affairs”, and apply for subsidies and allowances for the elderly on the platform. They can complete livelihood services without leaving home through online consultation, handling and making appointments at community hospitals, etc., thus improving the efficiency of affairs. In addition, WeChat mini program can be combined with “farmers and forestry families” to achieve integrated services. The elderly can make an appointment to experience the new “smart endowment” in the community experience pavilion, which is conducive to the integration of online and offline resources and reflects the advantages of the smart endowment model of community service in Yuexiu District, Guangzhou.

3. Advantages of community service smart endowment model in Yuexiu District, Guangzhou

3.1 The current situation of social family structure and the rapid increase of population aging

3.1.1 Current situation of social family structure

Since the implementation of the one-child policy in the last century and the implementation of the comprehensive two-child policy in 2016, most families in China have a population structure of “4-2-1”. Two young people often have to support four elderly people and one or two children, so the burden of home-based care is heavy.\(^5\)

3.1.2 The aging of population is increasing rapidly

Yuexiu District of Guangzhou City to develop community service smart pension model is suitable for the rapid aging of China’s population, the rise of the Internet industry and China’s pension concept constantly changing the status quo, for the “Internet + pension” provides a good foundation. And it can be seen from Table 1 and Table 2 below that, among the elderly group, single elderly people account for a considerable proportion of the sector. At present, the institutional endowment cannot better meet the diversified needs of the elderly and the institutional endowment services are unified, which easily leads to the loneliness of many elderly people living in nursing homes and neglect the emotional needs of the elderly.

Table 2. Comparison chart of marital status date of elderly people of different genders in Yuexiu District in 2009 and 2017
3.2 Providing policy support and actively introducing service agencies

3.2.1 Providing policy support

As one of the old urban areas of Guangzhou, Yuexiu District has been listed as the provincial “smart health demonstration base for the aged”. According to statistics, there are 33 backbone enterprises of high-quality community smart pension in Yuexiu District, and the scale of smart pension industry can reach 134 million yuan. In addition, the Government of Yuexiu District has formulated 11 supporting policies. Every year, the government invests nearly 40 million yuan in smart pension service, supporting the implementation of the “3+X” smart pension model and building a “3+X” model integrating community service centers, pension enterprises and community pension institutions.

3.2.2 Actively introducing service agencies

In Jianshe Street, the government supports the purchase of social services and introduces two professional pension service institutions, namely Guangzhou Baijia Medical Road Health Management Co., Ltd. and Guangzhou Care Home Pension Service Co., Ltd. to provide more professional services for smart pension.

3.3 Cooperation with Internet platforms and setting up experience offices

3.3.1 Cooperation with the Internet platform

Through the cooperation between Xingguang Pingan Bao and Eleme, the daily service volume can reach 5,236 orders, and the accumulated monthly service of pension service can reach 1,247 person-times. In the experience office of building community services for home-based elderly care, the big screen in Suiyue Museum can display the real-time big data network of intelligent elderly care in the area.

3.3.2 Set up an experience office

The Suiyue Museum and nursing home were set up to allow the elderly to make an appointment online for on-site experience and test their physical health. At the same time, the elderly are also allowed to observe how the online platform operates. Click to switch to the interface of Xingguang Pingan Bao rescue platform for exchange. When the monitoring equipment worn by the elderly shows abnormalities, the elderly can send an alarm to the platform by themselves, showing the specific geographical location and effectively preventing the danger of the elderly[6].

3.4 Institutional pension is not perfect, traditional pension ideas

3.4.1 Institutional endowment is not perfect

Due to the early introduction of the reform and opening-up policy and the early acceptance of the concept of institutional endowment, many nursing homes have been built in Guangdong. However, under the influence of traditional concepts, the elderly are more willing to take care of the elderly in the family and get closer to their children. Therefore,
smart pension with community services is more conducive to meeting the physiological needs of the elderly.

3.4.2 Traditional thoughts and concepts of supporting the aged

With the rapid development of Internet information technology and the appearance of artificial intelligence, people’s traditional concept of family endowment has been impacted. Network information system is more convenient to use, and community health centers and related pension enterprises are also developing and mature, providing conditions for the elderly to use the intelligent system, making community services smart pension more perfect.

4. The problems of community service smart endowment model in Yuexiu District, Guangzhou

4.1 The cost of artificial intelligence equipment is high and the financial burden is heavy

In daily practice, the elderly need to wear certain monitoring equipment to monitor their physical conditions and install monitoring equipment in their homes, so that community care workers can arrive in time in case of emergency. But now it is difficult to network data platform technical requirement and artificial intelligence monitoring equipment using cost is still high, the future we may be able to the old people’s health through gathering data, combined with the background of algorithm analysis, and the hospital diagnosis and treatment in combination with calculated the elders if there is a possibility, timely put forward the corresponding preventive care plan. However, it is difficult for ordinary working families to afford the upgrade of intelligence. And, this technological means is also one of the reasons why the smart pension model has not been widely applied.

4.2 The relevant legal guarantee is not perfect

Although Yuexiu District has been listed as the province’s “smart and healthy elderly care demonstration base” for the first time and received attention from relevant government agencies, there is no specific legal and legislative guarantee in daily practice. The distribution of rights and responsibilities of nursing staff in elderly care institutions is not clear, the distribution of institutional functions is unclear, the operation efficiency of institutions is low, and the rights and interests of the elderly are easily damaged. At the same time, the internal expenses of community pension service institutions are not clear, and relevant government agencies do not supervise them in place. Therefore, the relevant policy guarantee of community service smart pension model still needs to be improved.

4.3 Low level of coordination among pension service institutions

As “wisdom health and pension demonstration base”, Yuexiu District, a total of 18 street within the community, they pilot three street wisdom endowment health construction, supporting infrastructure comprehensively, such as application installed GPS alarm monitoring equipment, peace treasure body positioning, agriculture, forestry and the somebody else, Guangdong save trouble, joint “hungry” take-out platform catering, and so on. There are also some high-quality smart pension enterprises, such as Yijia Nursing, Guangzhou Baijia Medical Health Management Co., Ltd., Yuexiu Yinxing and other professional pension institutions have been introduced to improve home smart pension. However, as a new pension model, there is still a lack of coordination between various institutions, and the specific management rules have not been implemented.

4.4 Intelligent old-age care equipment is not suitable for aging

At present, for the elderly group, there are generally blurry eyes and inflexible fingers, etc., while the operation of intelligent old-age care equipment is relatively difficult, which will bring inconvenience when they operate and use it. Therefore, it is necessary to increase the aging ability of intelligent old-age care equipment. For example, artificial intelligence voice recognition function is added to the intelligent old-age care equipment. The elderly can easily control the monitoring equipment and contact their children by speaking, and they can also contact community staff through voice and video function to inform the community staff of their needs.
5. The measures of improving the smart pension model of community service in Yuexiu District, Guangzhou

5.1 Encouraging the introduction of social capital and establishing the principal position of the government

5.1.1 Encouraging the introduction of social capital
As for the application of artificial intelligence equipment, it encourages the entry of social capital, forms a new industrial park for the elderly, focuses on the development of intelligent equipment for the elderly, promotes the popularization of intelligent equipment, reduces the cost of use, and adapts to the performance and operation to the personalized and diversified needs of the elderly.

5.1.2 Establishing the dominant position of the government
The government has the dominant position in the community service smart pension industry, attracting investment to the society, encouraging multiple social subjects to participate in, expanding the coverage of smart pension service, and fully stimulating the market potential of the community service smart pension industry.

5.2 Increasing policy support and playing a leading role

5.2.1 Increasing policy support
With nearly 250 million elderly people, China has the largest, fastest and longest aging process in the world. In addition, on January 14, China issued the Basic Norms for the Safety of Pension Service Institutions, which is the first mandatory national standard in the field of pension service in China and also the bottom-line requirement for the quality of pension service[8].

5.2.2 Playing a leading role
In addition to the Yuexiu District column as “intelligent healthy endowment demonstration base”, also we may regard the community as a whole operation details, increase policy support to its, the government need to specify a series of support the policy of community service pension wisdom, introducing more social endowment institutions, combine institution endowment and community endowment, give full play to the leading role of the central and local government, facing an open society, contribute to investment promotion and capital introduction, promote the construction of the folk capital investment, promote the development of community service pension industry wisdom.

5.3 Establishing a smart, healthy supervision system for the elderly and improving the remote monitoring system

5.3.1 Establishing a smart, healthy supervision system for the elderly
In recent years, the State Council and provincial and local governments have issued many specific implementation rules and evaluation standards for elderly care services, but there are still some problems, such as inconsistent measures for elderly care services and individual needs of the elderly, and standardized market management of the elderly care industry. Only by establishing a sound standard and framework system of community service smart pension can we better implement the corresponding government policies and standardize the healthy development of the pension industry market.

5.3.2 Improving the remote monitoring system
Through computer monitoring of the change data of each system, the telemedicine system, WeChat platform consulting system, health monitoring alarm system, remote nursing system for the elderly, etc., quality supervision and evaluation supervision are carried out, so as to improve the quality of community services and elderly care services.

5.4 Promoting the old-age care products suitable for aging and improving the educational level of the nursing staff

5.4.1 Promoting the old-age care products suitable for aging
Due to the limited education level of the elderly and their slow acceptance of new things, the usage habits of the
elderly should be taken into account when popularizing intelligent products for the aged and adapting to the needs of the elderly. For example, the elderly presbyopia, ear hearing loss pension product operation screen to properly enlarge the font, increases the volume.

5.4.2 Improving the education level of nursing assistants for the aged

According to the statistics on the education level of nursing assistants in China in 2014, the largest proportion of nursing assistants is junior high school education, 45.2%, followed by high school or technical secondary school education, 26.3%, 21.7 percent of primary school education, and 6.8 percent of university education[9]. It is an important measure to improve the education level of nursing assistants in the future. Concerning the development and design of smart endowment products of endowment enterprises, it is necessary to pay attention to the connection with nursing assistants and train nursing assistants in advance. At the same time, elderly education can be carried out in Suiyue Museum experience office, nursing home and other places to improve the elderly’s acceptance of smart pension products through nursing assistants.

6. Conclusion

Yuexiu District of Guangzhou is listed as the “smart health elderly care demonstration base”. Three streets in the district will be used to pilot the new community service smart elderly care model. Through the “3+X” model, community health service centers, community elderly care institutions and elderly care enterprises will be combined to install health monitoring equipment for the elderly. Through the use of peace treasure, Guangdong save trouble, such as agriculture, forestry and the somebody else online registration old man GPS alarm system, online business platform daily demand, gradually formed “Internet + endowment” wisdom of community service pension mode, to promote the community home endowment patterns of the Internet provides effective experience, is beneficial to relieve the contradictions of social endowment, at the same time, to solve the problem of theelderly community endowment will liberate children from the family pension, also eased government social pressure.

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