Problems and Countermeasures of Intelligent Elderly Care Service in the Context of Fewer Children in China

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Abstract　With the intensification of population aging and the implementation of the three-child policy, the elderly care pressure of Chinese families continues to rise. Therefore, accelerating the construction of a new intelligent elderly care service model is an important measure to actively respond to population aging, ease the burden of family elderly care and promote high-quality economic development. In view of this, this study analyzed the intelligent elderly care service to explore the relevant countermeasures of the intelligent elderly care service in the context of fewer children.

Key words　Elderly care service, Intelligent, Population aging

1　Introduction

On October 9, 2016, the *Fourth Survey on the Living Conditions of the Elderly in China* issued by China National Committee on Aging (CNCA) reported that there were approximately 40. 63 million disabled and semi-disabled elderly people in China, accounting for 18. 3% of the elderly population; more than 60% of elderly had family environment that the elderly did not adapt to the changes in the physical conditions. China's elderly care service system is facing a huge demand for services. The implementation of the family planning policy for more than 20 years has led to the formation of a large number of 4-2-1 or 4-2-2 family models in China, which also means that the pressure of family elderly care is greater and greater.

By 2050, China's elderly population will reach 33% of the total population, and each adult labor force needs to support 1. 6 elderly people. To a certain extent, the implementation of the three-child policy is conducive to alleviating the problem of population aging in China. However, what followed is the huge pension burden of the generations of 1980s and 1990s, which means that the generations of 1980s and 1990s not only have to bear the pressure of raising children, but also continue to bear the pressure of their parents and themselves.

Therefore, in order to actively respond to the aging population and promote the development of the elderly care service industry, the State Council issued the *Guideline to Promote the Development of National Undertakings for the Aged and Improve the Elderly Care Service System During the* 14th *Five-year Plan Period* (2021 -

2025), stressing the construction of a comprehensive, inclusive, and diversified elderly care service system to meet the growing and diverse elderly care needs of the elderly. Nevertheless, China's traditional family-based elderly care model is difficult to meet the diversified elderly care needs of the elderly at this stage. Therefore, intelligent elderly care relying on "Internet +" information technology has shown significant advantages and has become a new choice and new driving force to solve the problem of China's elderly care.

2　Main elderly care service models in China

At present, the three major elderly care models in China are mainly traditional family elderly care, supplemented by organizational elderly care and community-based elderly care. In February 2011, the Ministry of Civil Affairs issued the 12th *Five-Year Plan for the Construction of a Social Elderly Care Service System*, namely, the "9073" guidelines for elderly care: "90" means that 90% of the elderly could receive family care elderly care with the assistance of social services; "7" means 7% of the elderly receive community-based elderly care; "3" means 3% of the elderly are admitted to centralized elderly care in elderly care service organizations. On the basis of the three elderly care models, six operating models have been formed, namely bed rental, real estate rental, rental-sale combination, finance and insurance combination, membership system and others. With the improvement of the material level, the traditional family elderly care model has historical limitations in the new era. The increase in social competition has sharply increased the labor cost of traditional family elderly care, and the pressure on children's support for their elderly parents has increased. It is difficult to find a bed in elderly care organizations; problems such as the poor facilities of elderly care service in community-based elderly care continue to emerge. These problems have led to the rapid rise of intelligent elderly care, an elderly care service industry relying on a big data platform, and it has been gradually piloted and promoted in large cities.

3   Significance of intelligent elderly care service in the context of the fewer children

In February 2017, the Ministry of Industry and Information Technology, the Ministry of Civil Affairs, and the National Health Commission issued the *Action Plan for the Development of Intelligent and Healthy Elderly Care Industry* (2017 – 2020), which made a comprehensive and systematic plan for the intelligent and healthy elderly care service industry, clearly proposed to comprehensively build a healthy elderly care service information system, and accelerate the promotion of intelligent elderly care service under the "Internet + big data". In 2021, China fully liberalized the three-child family planning. Against this background and fewer children situation, the advantages of the intelligent and healthy elderly care service industry will become increasingly prominent. Relying on the "Internet +" big data platform, the intelligent elderly care service combines modern science and technology with offline communities, hospitals, families and other related resources by connecting families, communities and governments, and provide more comprehensive, efficient, systematic and professional elderly care services for the elderly. Using modern science and technology and related intelligent equipment, it not only saves manpower and time costs, but also integrates social resources, accurately matching the elderly care needs of the elderly, improving the utilization rate of social elderly care resources and making the elderly enjoy professional elderly care services[1]. At the same time, the intelligent elderly care service based on big data information technology can cover remote towns and rural areas. Through establishing a network platform, the elderly in remote areas can upload their basic data to the relevant platform, and use mobile phones and other terminal devices to obtain simple medical consultation and other services at home to get known their physical health conditions. This not only saves social costs, but also further improves the level of elderly care service in rural areas of China. More importantly, the intelligent elderly care service can use the Internet + terminal system to connect with other social and economic industry chains to meet the diversified elderly care needs of the elderly, and improve the elderly's sense of well-being in an all-round way, so that the elderly can truly "care for themselves"[2].

4   Problems existing in China's intelligent elderly care

At present, the development of the Internet of Things has enabled the intelligent elderly care service industry to grow rapidly. Many regions have launched corresponding smart elderly care models in line with local conditions, such as the Cangnan model in Cangshan County, Zhejiang Province. Based on the "Intelligent Housekeeper" information service platform, the model has established an "Intelligent Assistance Currency" mechanism and a "Neighborhood Self – Service" time bank, *etc*. Another example is the 15-min healthy elderly care service life circle built in Yuexiu District, Guangzhou, which provides comprehensive life services for the elderly. These elderly care models with local characteristics provide a certain reference and reference for the implementation of smart elderly care in China. However, implementing

the intelligent elderly care service model does not happen overnight, and there are still many practical difficulties and problems to be faced.

4.1   Intelligent elderly care service system is still not well established   At present, although China has issued many policy documents on the promotion of intelligent elderly care and has carried out pilot demonstrations of intelligent elderly care applications in some cities. However, most of the documents are guiding opinions, and mainly stay at the level of home services and elderly care policies[3], which has a limited effect on the real implementation of the intelligent elderly care model, thus it cannot form a systematic, standardized and complete system, and it cannot form a unified standard industry system specification. In addition, this will also lead to the uneven phenomenon of good and bad in the implementation of the intelligent elderly care service model, resulting in chaos in the industry. There is no unified intelligent elderly care standardization system. On the one hand, the intervention of third-party agencies of Internet intelligent elderly care service companies lack relevant regulatory systems, resulting in a wide variety of services and uneven quality. On the other hand, intelligent elderly care relies on the "Internet +" big data platform, and targets the elderly group. Therefore, if there is no standardized industry system, some Internet companies that lack self-control will use this platform to deceive the elderly in order to rake in enormous profits, which will also affect the implementation and sound development of the intelligent elderly care service model.

4.2   Attention to elderly care demands is insufficient   The *Action Plan for the Development of Intelligent and Healthy Elderly Care Industry* (2017 – 2020) promoted the development of intelligent elderly care service to a certain extent. However, from the intelligent elderly care products on the market and the ability of the elderly to use them, many products are not suitable for the demands of the elderly. For example, wearable devices, which are more difficult to wear for the elderly living alone, especially in remote rural areas. This also shows that many product developers have not paid attention to the intelligent elderly care service products that the elderly really need, and cannot better meet the elderly care service demands of the elderly.

4.3   Government support and supervision are weak   At present, China's intelligent elderly care service industry remains in the stage of pilot operation and has not formed a certain scale. This also leads to the lack of a clear delineation of the boundary between the government and the market. At the same time, in the trial operation cities, the relevant governments have insufficient support, lack of supervision, and unclear center positioning. Without a unified system and norms, it is difficult to promote the rapid and healthy development of the intelligent elderly care service industry.

4.4   Industrial coverage of intelligent elderly care service is small   At present, China's intelligent elderly care service industry is mostly concentrated in first-tier cities such as Beijing and Shanghai. It has still not radiated to other cities on a large scale. The intelligent elderly care service industry in cities such as Beijing and Shanghai has not been widely publicized and diffused, only limited to certain districts. In addition, the intelligent elderly

care service industry targets the elderly group, while the elderly often need to go through a long period of time when accepting new things. The cost of manpower and material resources has also made it impossible for the intelligent elderly care service industry to carry out large-scale coverage and publicity.

4.5 Professional talents in intelligent elderly care service industry are insufficient Intelligent elderly care is an intelligent elderly care based on big data, Internet of Things and other technological means. The development of intelligent elderly care products requires high technology and high skills, so professionals are the key to promoting the development of intelligent elderly care[4]. The talents needed by the industry of intelligent elderly care are not only single-type talents in the traditional elderly care industry in the past, but compound talents with relevant knowledge such as medical treatment, psychological counseling, and rich nutrition knowledge. At present, the intelligent elderly care service industry is in the early stage of trial operation. Therefore, there is a lack of compound talents and professional teams. On the one hand, the society currently has a low degree of recognition of practitioners in the industry of elderly care service, and some people even have prejudices, which also leads to the reluctance of most young people to work in this industry. Most of the people engaged in this industry are older laid-off and re-employment groups, these groups of people have less knowledge of the Internet and cannot accurately use related smart devices. On the other hand, the salaries of the elderly care service industry are currently low, and it is impossible to attract relevant talents to enter the industry, and it cannot benefit more elderly people in need.

5 Countermeasures for intelligent elderly care service in the context of fewer children

5.1 Building an integrated platform for intelligent elderly care It is recommended to build an integrated platform relying on the Internet + large platform to combine the elderly, children, communities, elderly care institutions, medical institutions, medical care technology products, *etc.*, and integrate social service resources, make the intelligent elderly care service industry form a complete system faster to meet the multi-level and diversified elderly care needs of the elderly. At the same time, it is recommended to continuously improve the platform relying on government communities and social public service resources, so that the intelligent elderly care service is systematically launched, and the platform gradually becomes a professional supply and demand service platform that meets the demands of elderly care, promote the upgrading of elderly care services, so that the elderly can enjoy professional and comprehensive elderly care services to the greatest extent.

5.2 Focusing on demands of elderly care Under the background of the three-child policy and fewer child environment, the implementation of intelligent elderly care service must not only meet the basic material needs of the elderly, such as clothing, food, housing, and transportation, but also meet the spiritual and cultural elderly care needs of the elderly, such as communication and entertainment, provide comprehensive and professional care for the elderly. First of all, it is recommended to design relevant intelligent devices that meet the demands of the elderly according to the demands of the elderly, so that the functions are simple and meet the demands of the elderly, so as to reduce the consumption cost of the elderly using smart devices to a certain extent. Secondly, when enterprises develop intelligent elderly care-related application software, they should make the application opening interface simple and user-friendly. The font size used should be enlarged to facilitate the elderly to find related functions. Finally, when collecting the data of the elderly, it is necessary to pay attention to the confidentiality of the data, and at the same time comprehensively process the information to dig deeper into the validity of the information, so as to provide more reliable data support and solutions for the intelligent elderly care industry[5].

5.3 Strengthening government support and supervision The healthy development of the intelligent elderly care service industry is inseparable from government supervision and support. Relevant government departments should provide certain economic support and provide certain preferential policies, to develop the intelligent elderly care service industry. In the first place, it is necessary to strengthen supervision, improve the relevant laws, regulations and institutional systems of the intelligent elderly care service industry, and set up a professional intelligent elderly care service management organization to accelerate the standardization of intelligent elderly care. Secondly, on the basis of carrying out the pilot work of intelligent elderly care in various places, sum up work experience and lessons, formulate practical and specific standards, focus on top-level design, improve the system, and formulate unified standards to provide systematic and standardized industry guarantees for the implementation of the intelligent elderly care model[6].

5.4 Enhancing the propaganda of intelligent elderly care service industry The intelligent elderly care service industry based on "Internet +" targets the elderly group. However, some elderly people do not have much understanding of the Internet, and they are less accepting of new things. Therefore, it is necessary to make full use of television, radio, the Internet and other channels to publicize intelligent elderly care service, and cooperate with neighborhood committees and village committees to cover every resident, and continuously improve the publicity of intelligent elderly care service among the elderly population. At the same time, it is necessary to strengthen cooperation with the government, crack down on Internet fraud, increase the enthusiasm and recognition of the "Internet +" intelligent elderly care service among the elderly, and promote the rapid development of intelligent elderly care.

5.5 Cultivating professionals in the intelligent elderly care service industry To implement the intelligent elderly care model, talent building is an indispensable work. Therefore, it is particularly important to cultivate a team of compound talents. It is recommended to strengthen the training of professionals in this industry, broaden the channels for talent training, rely on universities to open related majors in elderly care service, and carry out systematic and comprehensive interdisciplinary talent training to deliver outstanding talents for this industry. Besides, according to

the industry standards formulated by the government, it is necessary to gradually strengthen the professional norms of industry personnel, so that the elderly can truly enjoy the convenience and comfort brought by intelligent elderly care. In addition, it is necessary to improve the salaries of employees in the intelligent elderly care service industry, attract more outstanding talents to join this industry, promote the healthy development of the intelligent elderly care service model, and meet the growing diversified elderly care needs of the elderly.

6 Conclusions

In the context of three-child policy, fewer children and population aging, China's intelligent elderly care service industry is developing rapidly, and it has gradually become a new measure for China to deal with population aging and reduce the burden of elderly care. Although there are many new problems to be solved urgently at this stage, the future development trend of the intelligent elderly care service industry will still gradually tend to be intelligent, comprehensive and large-scale, really improve the level and quality of China's elderly care service, so that the elderly people can truly realize "support and care for the elderly", and form a complete, efficient and professional intelligent elderly care service

industry system, and promote the vigorous development of the intelligent elderly care model.

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