Analysis on the problem of smart pension in China

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Abstract: Based on the constant aging situation in China, social problems such as increasing pension pressure, the backward pension industry and the low happiness of the elderly are becoming more and more prominent. With the development of the Internet and artificial intelligence, smart pension arises to promote the upgrading and transformation of traditional pension. This essay aims to positively explore the possible development of wisdom endowment by firstly analyzing the actual development of wisdom endowment in China, then explaining the problems from four aspects: standard system construction, supply and demand, the degree of wisdom, and regulatory. Finally, it could propose some effective suggestions from the national conditions to gradually develop the wisdom endowment and improve the development of Chinese society.

1. Introduction

Compared the aging population to foreign developed countries, the current situation of China is "old before rich". The impact of population control policies such as early family planning and the slump of fertility rate result in the contraction of the bottom in demographic pyramid and the proportion of the elderly relatively increasing, which lead to the population aging. With the development and popularization of internet technology, smart pension services emerge at the historic moment. It brings new ideas for solving the existing pension problems in China and builds a solid foundation for the upgrading of the traditional pension model. However, nowadays, the development of smart elderly care services is not mature. Most of them focus on the research and development of intelligent products, the construction of information platform, and adding internet information technology to the elderly care services, so it does not really realize the deep integration of intelligent technology and the elderly care.

China faces the problem of an aging population and pension pressure. Developing the wisdom endowment service can effectively integrate pension resources, improve the supply and demand, and provide timely and rich services to meet the demand of elder people. It not only conforms to the requirements of the development, but also provides a new idea for Chinese pension service, which should be an effective way to solve the problem of pension.

2. The development status of smart elderly care in China

2.1. Market supply and demand status

The demand of smart pension market is not only basic life care, but also includes the high-level health care and spiritual needs for the elderly. Because of different personal habits, family background, economic situation and educational levels of them, the pension needs should be diversified[1]. In terms of smart pension supply, the types of enterprises with smart pension include smart product development enterprises, smart pension information system construction enterprises, smart service platform operators and service providers. At present, most parts of the country have gradually built wisdom pension service system, mainly based on the Internet, cloud computing, intelligent technology, and through direct purchase services or enterprise cooperation, constructing...
wisdom endowment information service platform with the help of big data system demand analysis and intelligent equipment for terminal service products for the elderly to provide diversified services in time.

2.2. Platform and product status quo

Nowadays, many places have started the smart pension information platform. Affected by the different level of economy, the platform construction process and level are different. In general, most of them integrate various local pension resources and implement the platform supervision. Relevant intelligent pension products in the smart pension market are also gradually enriched. Portable health monitoring products and intelligent monitoring products have developed rapidly and have achieved positive performance in the market. Portable health monitoring products mainly include watch health monitor, automatically alert vital signs detector, GPS positioning, call-for-help intelligent crutches and other mobile equipment for monitoring the health, unsafe state alarm or call for help to ensure the health and safety of the elderly. Intelligent monitoring products are mainly used in medical care, aiming to reduce the burden of nursing staff and facilitate the care of more elderly people, for instance, intelligent vital signs monitoring mattress or pillows, integrated intelligent bed chair, electric nursing bed, foldable walking intelligent robot, and etc.

2.3. Current situation of supervision and management

The government undertakes the basic function of accepting and maintaining the report for the normal market order. When product problems occur in the smart pension market and lead to large social issues, the government will investigate and deal with them in time, maintaining the basic market operation order in the usual market supervision process, and ensuring the fair competition and stable development of the market on a macro level. In addition, there is no regulatory countermeasure for the new problems caused by the addition of technological factors in pension products. Internet and artificial intelligence or other new technologies are integrated into pension products, which make pension products with great uncertainty, such as program errors resulting in dangerous behaviors or wrong instructions due to identification errors. For these new problems that have not appeared in traditional pension products, the government does not have efficient regulatory measures, which are caused by the rapid development of typical product technology while the regulatory means or methods failing to develop simultaneously.

3. Problems existing in China's smart pension services

3.1. Related supporting facilities and connection are not perfect

A standard system for smart elderly care services has not been established yet. Firstly, the main reasons are lacking top-level design of smart elderly care services, overall planning and design of the development of related industries, the failure to generally grasp the development ideas, and overall direction of the standardization of elderly care services. This makes most of the policy content of smart pension stay at the level of guidance and principle, lacking quantitative quality evaluation and service standards or other related specific policies and measures[2]. Secondly, the service standard design of smart elderly care is not complete and scientific enough. The evaluation indicators are not detailed, the standard design of the personal and property safety of the elderly service personnel is not taken into account, and the standardized services are not provided to the disabled, disabled and lonely elderly groups in terms of medical care, life assistance and psychological counseling. Besides these, there are deviations in the implementation of the standards. In addition, market access and evaluation criteria, laws and regulations on investment, capital investment, hardware, interface, service subject, and the evaluation mechanism are not perfect. Therefore, it is difficult to form efficient and dynamic evaluation standards in satisfaction survey, service evaluation, feedback and processing.

3.2. Supply and demand imbalance

As for the supplement, the maturity of technology and management is not high enough, the
industrial development mechanism and mode are not perfect, the wisdom of supply products and services is low and relatively single. Additionally, the enterprise fails to segment and select the pension market, and the services or products provided cannot well meet the consumer needs of the elderly group[3]. In terms of demand, the elderly groups are influenced by many factors such as traditional concepts, personal habits, consumption concepts, education level, physical conditions and other factors, which lead to their low awareness of smart care, poor adaptability, and insufficient consumption ability for smart care products and services[4]. Apart from that, the matching degree between the demand of the elderly group and the intelligent elderly care supply service is low. The operators of smart elderly care enterprises lack the professional ability to accurately locate the elderly care needs by using the smart information platform. In addition, the degree of intelligence is low, and the supply of offline resources and services is insufficient, which is difficult to support online and offline coordination and parallelism. As the elderly group mainly buy pension products through offline stores, their ability to use the Internet is limited, while the types of pension products in offline stores are limited. Accordingly, various products of smart pension are updated rapidly, and the elderly cannot understand the function of the products in time, which makes it difficult for the elderly group to buy smart pension products.

3.3. Platform and products intelligent and aging degree is not high

In the actual pension process, many smart pension equipment with research and development put into the market are not smart. Firstly, the preset product function does not match the actual needs of the elderly[5]. In the absence of market research and in-depth analysis of the needs and potential needs of the elderly, the existing smart elderly care enterprises make subjective assumptions about the needs of the elderly and design smart products accordingly, resulting in equipment function positioning that does not conform to the way of thinking and living habits of the elderly. Secondly, Smart pension products lack innovation. The intelligent elderly care equipment in the elderly care market has a low degree of intelligence, and the system design is not reasonable enough, which makes it difficult for the intelligent elderly care equipment to connect software and hardware. The service platform is insufficiently developed for aging, and online and offline elderly care services cannot be coordinated. Thirdly, there are problems in the construction of the smart pension information service platform. On the one hand, the regional intelligent pension platform runs independently, the system development is imperfect, the platform is lack of information sharing and poor compatibility. The coverage is small, there are obstacles to providing for the aged across regions, and services can only be provided in this region. On the other hand, the platform data collection is not comprehensive enough, and it lacks in-depth and dynamic date monitoring and analysis functions. It is difficult to truly and comprehensively reflect the physical condition and service needs of the elderly. Moreover, the platform date lacks industry supervision, and there is a lack of privacy date leakage.

3.4. The absence of supervision and management has potential risks

Firstly, the responsibility for telemedicine is unclear. Multiple responsible subjects are involved in telemedicine services used by the elderly, including not only doctors who provide medical services, but also telemedicine service platform builders, platform operators, and medical institutions. Under the situation that it is difficult to identify the actual responsibility and right clearly, the medical problems of the elderly are prone to prevarication and bickering. Secondly, third-party supervision has little practical effect. The actual regulatory body is not clear, the government, platform operators, pension communities and institutions are involved in the supervision process. The third-party supervision organization is influenced by authority and has a low degree of actual participation. There is no detailed and specific rules and regulations for the supervision work, which is limited by the existing technical level, the supervision means are backward, and the supervision is powerless. The supervision process is not transparent, the supervision results are not made public, the problems found in supervision are not dealt with in time, and there is a lack of accountability mechanism. Thirdly, the smart platform has the risk of information leakage. On the one hand, the holders of intelligent platform information may sell
platform data for commercial profit purposes and engage in illegal profit-making activities. On the other hand, because the smart pension platform is shared by multiple parties, leakage may occur in the process of individual subject information sharing. At the same time, because the intelligent pension devices used by the elderly are connected to the Internet, there is also the possibility of information leakage in the process of use.

4. Suggestions on optimizing Wisdom Endowment Service in China

4.1. Improve the construction of standardization of intelligent pension

On the one hand, the government should formulate standards and rules related to the smart pension industry. The government should formulate qualification standards for smart pension products and services, and conduct sampling testing on the factory products. The testing contents mainly include whether the radiation value is in the safety range, the impact of product faults and other safety aspects, and the qualified products will be awarded product qualification certificates. It is stipulated that smart pension enterprises must publicize the main intelligent technology names of their products or services and the main research and development direction of the intelligent field, so as to facilitate the effective integration of smart pension resources, promote technical information communication between enterprises, avoid the waste of resources caused by information asymmetry, and reduce enterprise costs. In addition, the government should speed up the formulation of smart pension operation, research and development, system development, service platform construction, supervision and service fee standards. And speed up the improvement of smart pension enterprises for the elderly consumer groups of personal information collection criteria. On the other hand, according to the income and demand of the elderly and the distribution of intelligent pension service personnel, the government should scientifically formulate intelligent pension products and service standards from the aspects of daily care, medical security, spiritual sympathy and so on. Refine the evaluation criteria of products and services, and clearly define the access qualifications of intelligent old-age nursing staff, social workers and service personnel. And gradually establish the basic standards and requirements for the application of intelligent pension technology and the allocation of equipment and facilities.

4.2. Adjust the relationship between supply and demand

In order to solve the dilemma of insufficient industrial supply due to the growth of smart elderly care demand, the government should increase the supply of smart elderly care services. Starting from the gap between demand and supply and the measure standard that demand and supply is close to balance, the government should consider how to increase supply according to the demand of intelligent old-age service, and accurately calculate the difference between demand and supply so as to determine how much to increase supply. The government should also choose the corresponding strategy of increasing supply according to the value of increased supply. The specific ways and methods of increasing supply should be selected according to the need for increased supply in this region, and the local government should take balancing the supply and demand of intelligent old-age services as the starting point when choosing the strategy of increasing supply. The specific method can be adopted as long as it can achieve the goal of balancing supply and demand without harming the legitimate interests of both supply and demand of intelligent pension services.

In order to solve the waste of smart pension resources caused by the mismatch between supply and demand, the government should use Internet technology to promote the effective connection between supply and demand. The government should accelerate the deep integration of information technology and intelligent pension services such as Internet, big data and cloud computing, smooth the information exchange channels between the supply side and the demand side, and eliminate the information asymmetry between the supply side and the demand side. The government should support the joint development of smart pension services, provide policy support for enterprises, form an agglomeration effect, integrate smart pension resources, and effectively dock the needs of smart pension. In addition, the government should also open up public information resources related
to pension services to provide more information on pension resources for the supply side, so as to facilitate the supply side to accurately find the demand side. At the same time, it is also convenient for the demanders to find the suppliers of intelligent pension services.

4.3. Improve the degree of intelligence and technology integration

The government should guide the intelligent pension industry, strengthen the deep integration of science and technology and intelligent pension services and equipment, and improve the quality of pension services. Mainly from the following aspects.

Firstly, the government should guide smart pension institutions to improve their operation models, increase high-accuracy speech recognition analysis systems, and help elderly people with visual impairment or lack of cultural education to use smart information platforms to purchase services. At the same time, it is necessary to accurately integrate the pension resources in the region and simplify the process from sending demand information to receiving services for the elderly. Secondly, the government should promote the integration of artificial intelligence AI and intelligent pension services. Support intelligent pension enterprises to design and develop intelligent pension robots and the application of intelligent sensing, intelligent identification, intelligent planning and control technologies, and establish intelligent product experience points for intelligent pension[8]. Promote the application and development of artificial intelligence in home, construction, medical treatment, security and other aspects. Provide pension data collection environment for intelligent pension institutions with artificial intelligence development and application, and provide data support for the integration of artificial intelligence into pension services. The government should carry out the deep integration of artificial intelligence into the old-age experimental community and establish a convenient, safe and healthy intelligent pension infrastructure. To explore the direction for more integration of artificial intelligence into pension services, and through the experimental community collection of relevant pension data to improve the function of algorithm training and deep learning, and constantly improve its intelligence[9]. Thirdly, the government can set up a special fund for technological innovation of intelligent pension to guide intelligent pension enterprises to cooperate with scientific research institutes or universities to strive to overcome the problems of core technology.

4.4. Strengthen the supervision of smart elderly care

In terms of the government's own supervision, it is necessary to establish the main supervision department of the smart pension. As the civil affairs department is responsible for the initial promotion and supervision of intelligent pension, and the social department has the advantage of being familiar with population information, it is most appropriate for civil affairs department and social department as the main body of intelligent pension supervision to promote the supervision work together. The government should determine the specific contents of supervision in the form of documents, provide the main body of supervision with a basis for law enforcement, and ensure the stability of the operation of the supervision system. At the same time, the government also needs to assess the supervision work, the assessment method mainly includes four parts: guiding principles, content classification, quantitative scoring method, responsibility and power identification. In order to avoid being affected by interdepartmental interests and ensure the fairness of the assessment process and results, the government should invite non-governmental organizations to participate in quantitative scoring and result evaluation. To prevent government supervision from going through the motions from becoming a mere formality. The whole evaluation process should be open and transparent, subject to the supervision of the masses. The evaluation results should be implemented within a limited time to ensure legal supervision, strong supervision, and punish illegal activities in the smart pension market. In terms of giving full play to the role of third-party supervision, the government should attach importance to the role of pension service associations, strengthen information communication, balance multi-interests, and establish a non-governmental supervision mechanism.

In addition, the government should improve laws and regulations on privacy protection and effectively protect the legitimate rights and interests of individuals. The government can also
consider increasing the protection scope of personal privacy in civil law, including the privacy information formed under the emerging network technology into the scope of privacy protection, according to the dual attributes of privacy property personality, consider the infringer to compensate for mental damage and economic compensation[10].

5. Conclusion

Smart pension is the product of the progress of the times and the development of science and technology. It is an effective way to deal with the aging population, which can fully integrate pension resources, improve the quality and efficiency of pension services, and promote economic development. However, the smart pension is still in its infancy, and there are still many problems in the practical application and development in China. I believes that by continuous exploration and improvement of the construction of smart pension system and gradually forming a development model suitable for China, the unique advantages of smart pension can be given full play, and smart pension will play a greater and greater role in the pension service in the future.

References


