

Research on the development mode of intelligent elderly care from the perspective of Internet

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Abstract:China is accelerating into the deep aging, the demand for elderly care services presents personalized, diversified, multi-level characteristics,the traditional old-age service model faces particularly serious problems such as supply and demand mismatch, low service efficiency and lack of resource integration.Intelligent elderly care service has the advantages of intelligence, immediacy, interaction, convenience, humanity, full-time technology,China, especially in developed areas, due to its resource endowment,the relative perfection of information technology and intelligent facilities,the elderly population has excellent resources with a relatively high educational level Potential, for the development of intelligent pension services to provide the possibility.

Background Study

The aging population is increasingly aging,China presents a large base of the elderly population、the obvious trend of aging,the existing aging population is over 160 million,and increased at a rate of nearly \$8 million a year,during the 14th Five-year Plan period,the national elderly population will exceed 300 million,will move from mild aging to the situation of moderate aging while the life care of the elderly,spiritual and cultural needs are becoming increasingly prominent.

The 19th National Congress of the Communist Party of China has pointed the way for China to develop artificial intelligence. The role of artificial intelligence in serving economic and social development is becoming increasingly prominent.In the era of artificial intelligence, the main characteristics of elderly care services is to make full use of robots, speech recognition, image recognition,AI-related technologies, such as natural language processing and expert systems,to ensure the later end of medical resources, to realize the organic integration of intelligent devices, smart home, telemedicine and intelligent robots,to provide the elderly with comprehensive, online and offline and comprehensive medical care services for the elderly.This paper summarizes the research of AI elderly care service from the perspective of development mode and implementation path.

1.Intelligent pension

1.1.Quality of intelligent elderly care services

Machine learning is one of the core technologies of artificial intelligence, and machine learning is the main research direction of artificial intelligence,it mainly includes three parts of large-scale machine learning, deep learning and reinforcement learning^[1].Artificial intelligence is integrated into the industrial, agricultural and medical fields, but also into the field of elderly care services."Artificial intelligence + pension" is taking the Internet as

the carrier,a new elderly care service model that integrates biometric recognition, machine learning, emotional computing, visual and speech recognition, natural voice processing, and big data processing,collect the voice, action, mood and physical condition data of the elderly through the intelligent terminal,and then calculate the results through cloud computing and save them in the database,provide reasonable feedback on learning and breakthrough^[1],improve the quality and efficiency of elderly care services.

1.2.Content of intelligent elderly care services

With the development of the Internet of Things and sensing technology, elderly care service products are gradually intelligent^[3]. For example, with the help of the smart home system platform, the elderly can learn knowledge, collect information, buy goods and elderly care services online.Britain's "smart house" and "Internet houses",the "Internet kitchen" in Denmark,Finland's "active family life" pension technology products,Japan's "baby Lloyd" robot and "machine coat" are all artificial intelligence services products^[2].The development of artificial intelligence pension service lies in the change of the traditional pension concept.

2. Development model of intelligent elderly care

2.1.Definition of intelligent elderly care service

The intelligent elderly service mode with Chinese characteristics refers to the intelligent elderly service mode with Chinese characteristics led by the government and the market as the main body.The responsibilities of elderly care services are diversified. Individuals, families, communities, institutions, the market, and the government cannot assume the responsibility of AI elderly care services in China alone^[9].By adjusting the industrial structure, to provide a wealth and diversity of industrial services, truly benefit the majority of the elderly population.

2.2.Features of the intelligent old-age care service model

In terms of supervision and management, the government should

play its due role in controlling the quality development of AI elderly care services^[10]. Intelligent service platform, to build a national unified, real-time updated artificial intelligence pension service platform; intelligent medical service; intelligent service equipment. Artificial intelligence service for the elderly facilitates the life of the elderly. For example, the German voice telephone can adjust the volume of the phone according to the size of the elderly user, the ingenious design promotes the effective communication between the elderly and others^[11].

2.3. Main contents of the intelligent elderly care service model

According to the experience of intelligent elderly care service and domestic practical exploration, intelligent elderly care services are incorporated into the elderly care services, based on intelligent terminal equipment, the Internet of Things, cloud computing, big data, artificial intelligence and mobile Internet as the technical support, matching intelligent life care, intelligent medical and health care, intelligent cultural entertainment, smart home and other services, realize the allocation of pension service resources in China.

3. Challenges facing intelligent pension

3.1. Constrained by traditional ideas

China's traditional concept of elderly care is deeply rooted, and the Chinese elderly basically spend their old age in peace at home. Nowadays, artificial intelligence pension service is gradually emerging, with communities and institutions equipped with intelligent robots and other intelligent equipment gradually entering people's lives. Artificial intelligence pension brings convenience to people's life, but also challenges the authority of the traditional pension concept. It is also a long process to let the elderly abandon the traditional concept of home pension, go out of the family, and accept the new community pension and institutional pension.

3.2. The responsibility of the intelligent elderly care service is not clear

As an emerging mode of AI elderly care service, the service content, service standard and service form involved are all new modes, and the construction of AI pension service system is still on the way. Although the state has issued policies to support AI elderly care services, the subject of responsibility is still not clear. In order to build a perfect AI pension service system, it cannot only rely on enterprises, industries, communities or the national large-scale AI elderly service development planning, process standards, resource allocation and the elderly Industrial layout and other responsibilities. Only by relying on the government, under the leadership of the government, formulating reasonable development plans and standard processes, extensively pooling the human, financial and material resources, realizing the high sharing and reasonable distribution of resources, and building a reasonable industrial layout, can the AI elderly care service system be smoothly promoted. Therefore,

whether the government can clearly define it as the main body of AI elderly care service and make it play a leading role is also one of the challenges in the development of AI elderly care services.

3.3. Smart pension is expensive

Different from traditional elderly care services, artificial intelligence elderly care service is based on the information service platform, through the use of intelligent devices, intelligent home, telemedicine and intelligent robots and other equipment and facilities to provide elderly care services, so as to realize the integration of people, things, information and service resources. However, at present, AI-related industries have not yet formed a scale, and the cost of equipment and facilities is relatively high, which undoubtedly brings great cost burden to the construction of AI elderly care services.

3.4. Elderly people have difficulty in controlling smart products

If the elderly group of recipients of the elderly care service will not use intelligent products, it is difficult to realize the AI elderly care service. In 2016, the National Office on Aging released the results of the Fourth Sample Survey on the Living Conditions of the Elderly in Urban and Rural Areas in China, which showed that only 5% of the elderly regularly surf the Internet. To some extent, this data reflects the low degree that the elderly are familiar with modern technology products, and even most of the elderly may have obstacles to the use of smart products. From the perspective of behavioral ability, the elderly have not received the education of modern technology when they are young, and lack of training in the use of modern technology products. At the same time, the elderly population grows physically with the growth of age. Functional degradation, learning ability is relatively low compared with young people. For various reasons, it is difficult for the elderly to control intelligent products.

4. The realization path of intelligent elderly care service

4.1. Social consensus on intelligent elderly care services

A strong social consensus is conducive to promoting the development of reform practice. At present, more experts and scholars advocate artificial intelligence for elderly care services, a social consensus on the elderly population. Gather public opinion and form a social consensus on artificial intelligence elderly care services, it can not only promote the development of top-level system design such as AI elderly care service policies and regulations, it also lays the ideological foundation for the construction of intelligent elderly care service. The main body of the AI industry should accelerate the research and development progress of the AI elderly care service products, on the basis of scientific and reasonable market research, accurately grasp the actual needs, to provide a solid technical foundation and hardware equipment foundation for the development of artificial intelligence elderly care services, a complete

intelligent pension service system can also promote the elderly to accept intelligent pension.

4.2. Standard for intelligent elderly care services

In order to standardize and guide the development of the elderly care service market, the state has issued a lot of elderly care service standard system, but the AI standards for elderly care services have not yet been introduced. The state should formulate policy and standards, for provincial governments to formulate their own policies within this large standard, formulate standards for AI elderly care services in line with their own development situation. Unified standards can be formulated from the aspects of AI elderly care service equipment and facilities and service guarantee. In terms of service equipment and facilities, in artificial intelligence in all walks of life to develop hard product index standards, unified specification of product quality, to provide a safe and effective guarantee for the safe use of artificial intelligence equipment for the elderly group.

4.3. Implementation of intelligent elderly care service experience points

Implementation of intelligent elderly care service experience points, take the lead in establishing an intelligent old-age service operation mode with complete functions, complete equipment and moderate scale, to provide advanced experience for the national intelligent elderly care services, provides replicable policy advice and typical models. With the public and private pension service institutions as the trial point to carry out the intelligent pension operation mode, when artificial intelligence pension institutions are needed to explore an appropriate service model, then transition the successful experience to the community home, step by step, gradually realize the construction of artificial intelligence community home care services.

4.4. Strengthen the guarantee of intelligent old-age care services

Ensure and promote the development of intelligent elderly care services. In terms of policy guarantee, adopt the necessary tax policies, fiscal policy and other economic means, market-based measures, such as deregulation, socialization means and administrative means such as laws and administrative licenses, we will conduct macro-control over elderly care services. In terms of financial guarantee, increase investment in the construction of intelligent elderly care service facilities and facilities, provide financial guarantee for intelligent elderly care services.

5. Conclusion

The traditional pension model is no longer able to meet the growing demand of the elderly group for pension services. In the face of real needs, the direction of the future pension model of intelligent pension service. The implementation of intelligent pension needs the precise help of the government departments. At present, China's

intelligent pension is still in its infancy, many places still lack policies and implementation plans, therefore, the construction of the intelligent elderly care service model needs our efforts.

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