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Research on the protection of the elderly's right to health and economic policy under the background of artificial intelligence pension

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Abstract: *with the aggravation of global population aging, the application of artificial intelligence (AI) in the field of elderly care services has been paid more and more attention. This paper discusses the protection of the elderly's right to health and related policy research under the background of AI pension, summarizes the background and current situation of AI pension, and discusses the legal and ethical basis of the elderly's right to health. Then, this paper analyzes how AI technology can promote the realization of the right to health of the elderly, including improving the quality of life, providing personalized medical care and enhancing social participation. Finally, this paper puts forward a series of policy recommendations aimed at optimizing AI pension services, protecting the health rights of the elderly, and pointing out the direction for future research.*

Keywords: *artificial intelligence; Providing for the aged; The right to health of the elderly; Public administration; Policy Research*

1. Introduction

With the increasing trend of global aging, the health and well-being of the elderly has increasingly become the focus of social attention. This paper discusses the protection and Policy Research of the elderly's right to health under the background of AI pension, in order to provide reference for coping with the challenge of aging. This paper first analyzes the background and current situation of AI pension, and discusses how AI technology affects the quality of life and health status of the elderly. Subsequently, this paper discusses the legal and ethical basis of the elderly's right to health, as well as the practice and challenges of protecting the elderly's right to health in the context of AI pension.

2. Background and current situation of artificial intelligence pension

2.1 Aging society and the rise of AI pension

With the change of global population structure, aging has become an irreversible trend. According to the data of the United Nations, by 2050, the global elderly population aged 60 and above is expected to reach 2.2 billion, accounting for 22% of the total population[1].This change has brought unprecedented challenges to the traditional elderly care services, including the allocation of medical resources, the shortage of nursing staff and the increase of loneliness of the elderly.In this context, artificial intelligence technology has emerged as a crucial means of addressing the challenge of provisioning for the elderly, leveraging its attributes of high efficiency, intelligence, and customization.

Artificial intelligence in pension services primarily encompasses intelligent monitoring systems, auxiliary robots, telemedicine services, intelligent wearable devices, and health data analysis, among other facets. For instance, intelligent monitoring systems are capable of real-time health status monitoring of the elderly, promptly detecting abnormalities, and notifying medical personnel or family members[2]. Auxiliary robots can assume daily nursing duties, provide companionship and conversational engagement, alleviate the workload of nursing staff, and foster greater social interaction among the elderly. Telemedicine services facilitate professional medical consultations and treatments for the elderly at home via video calls, significantly enhancing the accessibility and convenience of healthcare services.

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2.2 Specific application of AI technology in the field of elderly care

The application of AI technology in the field of elderly care is gradually deepening, covering many aspects, such as intelligent health monitoring, auxiliary robots, personalized medicine and intelligent rehabilitation[3]. The intelligent health monitoring system collects the elderly's heart rate, blood pressure, activity and other key vital signs data in real time through wearable devices and home sensors, and analyzes them through AI algorithm to predict and warn potential health risks, so as to ensure timely notification of medical staff or family members in case of abnormal conditions. The auxiliary robot uses advanced robot technology, which can not only undertake housework, such as cleaning and carrying goods, but also provide emotional support, and relieve the loneliness of the elderly by accompanying them to chat, read or play games.With the help of AI technology such as in-depth learning, personalized medicine makes an in-depth analysis of the medical data of the elderly, so as to provide customized medical suggestions and treatment plans, so as to improve the treatment effect and quality of life. Intelligent rehabilitation uses AI technology to assist the elderly in rehabilitation training. It monitors the training process and provides real-time feedback through intelligent devices to help the elderly adjust the training plan according to their personal conditions and speed up the recovery process[4].

2.3 Policy support and market potential

The government and all sectors of society pay more and more attention to the application of artificial intelligence in the field of elderly care. Many countries and regions have issued supportive policies to promote the application and development of AI technology in elderly care services.The European Union and other regions have demonstrated a commitment to leveraging AI technology to enhance the quality of life for the elderly by initiating research projects. This not only underscores policy-level support but also highlights the substantial market potential within the AI pension industry[5]. As technology advances and the market expands, AI pension has garnered significant attention from enterprises and investors, who recognize its future commercial value and social benefits. However, the development of AI pension encounters challenges such as technological maturity, elderly acceptance of new technologies, and data privacy and security concerns. To ensure the healthy and orderly progression of AI pension, concerted efforts from governments, enterprises, research institutions, and all sectors of society are required. This involves formulating a comprehensive policy framework, intensifying technology research and development, safeguarding data security and privacy, enhancing the elderly's awareness and acceptance of new technologies, and improving their proficiency in utilizing AI technology through education and training[6]. These measures can effectively propel the growth of the AI pension industry, elevate the quality of life for the elderly, and guarantee the sustainable development of technology while fulfilling social responsibility.

3. The theoretical basis and practice of the protection of the elderly's right to health

3.1 Legal and ethical basis of the right to health

The right to health is the right enjoyed by natural persons according to law to maintain their normal physical function and safeguard the interests of health. The following is a detailed analysis of the legal and ethical basis of the right to health:

The legal basis of the right to health:Although there is no explicit provision on the right to health in the "basic rights and obligations of citizens" in the constitution of China, the right to health is regarded as a basic right of Chinese citizens. This can be inferred and judged by the constitutional interpretation method of the constitutional interpretation organ, or from the content of other articles of the constitution[7]. Basis of civil law: in China, the civil code of the people's Republic of China clearly stipulates that natural persons enjoy the right to health. Articles 110 and 990 point out that natural persons enjoy the right to health, which is part of the right to personality and is protected by law. Article 104 of the civil code further emphasizes that natural persons enjoy the right to health, and no organization or individual may infringe upon the right to health of others. Article 105 stipulates that if a natural person's right to life, body and health is infringed or is in other situations of distress, the organization or individual that has the legal obligation to rescue shall rescue him in time. Special legal basis: the basic medical and health care and health promotion law, which came into force on June 1st, 2020, first proposed citizens' right to health in accordance with the Constitution and specified the right to health in detail. Article 4 of the law clearly stipulates that "the state and society respect and protect

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citizens' right to health". Compared with the right to health in the civil law, the connotation of the right to health in the health law is more profound and rich, including not only the right to freedom from infringement, but also the broader right to access medical and health services, which has the nature of positive individual rights.

The ethical basis of the right to health:The legal and ethical basis of the right to health lies in human relations in essence. The research on the right to health cannot completely abstract legal ethics from experience, but should judge the characteristics of human and nature from the perspective of relationship, so as to provide a more comprehensive basis for correctly handling the legal and ethical issues of the right to health[8]. Conscience refers to the innate moral concept and is one of the legal and ethical foundations of the right to health. The implementation and protection of the right to health in the sense of the world is to pursue the value of good, which includes two aspects of individual good and social good, both from the conscience of life. Responsibility is a necessary part of the ethical basis of the right to health law. The realistic existence of any individual is always responsibility centered, and the social practice divorced from responsibility lacks internal motivation. The practice of the right to health needs responsibility to maintain and develop.

In addition, health ethics takes health morality as the research object, and studies the moral value, relationship, principle and responsibility of health morality. It requires "taking human health as the center" and following the moral principle of "everyone is health and health is everyone"[9]. This principle has been fully reflected in the health law, such as providing that citizens are the first responsible person for their own health, and that the state and government medical institutions provide medical treatment and health promotion services for citizens. The legal and ethical basis of the right to health constitute a solid barrier to protect citizens' right to health[10]. Law provides a clear basis for the protection and relief of the right to health, while ethics provides moral support and value orientation for the realization of the right to health.

As a basic human right, the right to health plays an important role in international legal documents and domestic legal system. Article 25 of the Universal Declaration of human rights and Article 6 of the International Covenant on economic, social and cultural rights both emphasize the importance of the right to health and require governments to take necessary measures to ensure that all individuals enjoy the right to the highest possible level of health.This encompasses the provision of prevention, treatment, and rehabilitation services, alongside the requisite social and economic support. Domestically, the constitutions and laws of numerous countries explicitly stipulate the right to health for citizens and establish the government's responsibility to furnish basic medical services.For example, some countries ensure that all citizens have access to basic medical services through the universal medical insurance system.

From the perspective of ethics, the protection of the right to health is based on several core principles: respect for human dignity, equality and justice. Respect for human dignity means that everyone's health needs should be respected and met, regardless of their social status or economic status. The principle of equality emphasizes that all people should enjoy equal opportunities in the right to health without discrimination. Justice requires that social resources in the distribution of health services should be fair and reasonable, especially for vulnerable groups, such as the elderly, should be given more attention and support. These ethical principles not only guide the behavior of the government and medical institutions, but also affect the social understanding and practice of the right to health.

3.2 The current situation and existing problems of the protection of the right to health of the elderly

In the field of public management, the protection of the elderly's right to health is an important manifestation of government responsibility and social equity.With the aggravation of population aging, governments around the world have formulated and implemented a series of policies and measures to cope with the growth of the demand for health services for the elderly. For example, in the "14th five year plan for healthy aging", the Chinese government put forward the goal of more rational allocation of elderly health service resources and basic establishment of elderly health service system by 2025, emphasizing the importance of optimizing supply side reform and promoting high-quality development of elderly health services. These policies are aimed at building a comprehensive and continuous elderly health service system covering urban and rural areas to ensure that the health needs of the elderly are better met. However, in practice, there are still challenges such as uneven distribution of medical resources, low acceptance of new technologies by the elderly, data privacy and security issues. Public management needs to constantly optimize policies, strengthen cross sectoral cooperation, improve the

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accessibility and quality of health services for the elderly, and encourage the participation of all sectors of society to jointly build an elderly friendly society, so as to realize the effective protection of the health rights of the elderly.

3.3 How artificial intelligence promotes the realization of the right to health of the elderly

Artificial intelligence (AI) technology is playing an increasingly important role in promoting the realization of the right to health of the elderly.Through the intelligent monitoring equipment, AI can continuously collect the vital signs data of the elderly, such as heart rate, blood pressure and activity, and conduct real-time analysis through the background algorithm. Once abnormal conditions are found, the system will automatically send an early warning and timely notify the medical staff or family members, so as to intervene in advance and prevent the deterioration of the disease. AI assisted diagnosis system analyzes medical images and clinical data through in-depth learning and other technologies to help doctors diagnose diseases more accurately and improve the efficiency and quality of diagnosis and treatment. In addition, AI can also provide personalized medical advice and treatment plans according to the specific situation of the elderly, so as to achieve precision medicine. The popularity of telemedicine services makes it possible for the elderly to obtain the diagnosis and advice of professional doctors at home through video consultation, which greatly facilitates the elderly who are unable to move and improves the accessibility of medical services. The application of AI in education and training can help the elderly better understand and use modern medical services, and improve their health awareness and self-management ability.

AI monitors the elderly's physiological indicators such as heart rate, blood pressure and blood glucose in real time through intelligent wearable devices and sensors. Once any abnormality is found, AI will immediately notify the family members or medical staff through mobile app, SMS or telephone, so as to achieve early warning.This real-time monitoring and early warning mechanism facilitates timely identification of potential health issues among the elderly, thereby reducing the incidence of emergency medical events and safeguarding their right to health. By analyzing the living habits, health status, and genetic information of the elderly, AI offers personalized health advice, including dietary recommendations, exercise routines, and medication management. This tailored health management approach provides customized schemes based on individual circumstances, enhancing both the effectiveness of health management and the quality of life. For instance, for elderly individuals with hypertension, the AI system can regularly disseminate pertinent health information and dietary suggestions, improving the precision and efficacy of health management. AI technology enables the elderly to access professional medical advice and services at home, transcending geographical limitations and broadening the accessibility and reach of medical services. Telemedicine services not only augment the utilization efficiency of medical resources but also provide prompt medical assistance to elderly individuals residing in remote areas. Through video calls and other remote communication methods, the elderly can consult with doctors to obtain professional medical advice and treatment plans, thereby safeguarding their right to health.

AI companion robots offer emotional support and companionship to the elderly through interaction, mitigating feelings of loneliness and depression. These robots simulate human emotional communication and provide consistent social engagement, effectively alleviating loneliness and enhancing mental health among the elderly. This emotional support assists the elderly in maintaining a positive mindset and better navigating life's challenges and difficulties. An AI-driven smart home system ensures the safety of the elderly and minimizes accidents through intelligent lighting, temperature regulation, safety monitoring, and other functionalities. The smart home system autonomously and intelligently controls the elderly's living environment, thereby improving their living comfort and security.

Furthermore, AI can facilitate fire monitoring, fall detection, asset tracking, and other functions, promptly identifying and responding to the emergency needs of the elderly, thereby providing robust protection for their safety. AI technology can also disseminate health education content to the elderly via smart devices and applications, aiding them in comprehending health knowledge and elevating health awareness. For instance, AI can periodically push health information and educational videos on healthy living to guide the elderly in adopting beneficial habits and preventing diseases. This form of health education aids the elderly in managing their health more effectively and safeguarding their right to health.

In summary, artificial intelligence plays a pivotal role in advancing the realization of the right to health for the elderly. Through real-time monitoring and early warning, personalized health

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management, telemedicine services, companionship and emotional support, smart home and security functionalities, and the promotion of health education and awareness, AI offers more comprehensive, convenient, and efficient health management services to the elderly, enabling them to enjoy a healthier and happier retirement.

4. Conclusion

The continuous advancement and application of artificial intelligence technology have provided unprecedented support for the realization of the right to health among the elderly. Ai not only improves the efficiency and quality of medical services, but also enables the elderly to enjoy more convenient and accurate health management through personalized and remote services. Looking forward to the future, we have reason to believe that through the joint efforts of the government, society and the technical community, the elderly will enjoy more perfect health protection and realize a healthier and dignified old age.

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