

Empowering the Silver Economy Through Digital Intelligence: A Study on the Impact of Online Healthcare on the Convenience of Home-Based Elderly Care for Older Adults in China

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Abstract. As the elderly population in China continues to grow, the issue of elderly care has become a major societal concern. Traditional methods of elderly care, particularly in terms of medical treatment, have faced significant challenges. In recent years, online healthcare services have gained popularity and have gradually been accepted by many elderly individuals, bringing significant changes to the traditional model of home-based elderly care. This study explores the impact of online healthcare on home-based elderly care, focusing on its role in improving accessibility, convenience, and the quality of health management for the elderly. Using both theoretical research and practical data, the study examines the current state of online healthcare and its integration into home-based care practices. The findings indicate that online healthcare services significantly alleviate the burden on caregivers, reduce the need for hospital visits, and enhance the overall health management of elderly individuals at home. The study concludes that integrating digital healthcare into home-based care models can promote the development of the silver economy and improve the quality of life for elderly individuals. Recommendations are provided for further policy development and technological innovation to support this shift.

Keywords: Silver economy, Online healthcare, Home-based elderly care, Elderly health management, Digital transformation.

1. Introduction

With the rapid development of China's social economy, the issue of an aging population has become increasingly prominent. According to statistics, by 2030, the elderly population aged 65 and above in China will exceed 300 million, accounting for over 20% of the total population, entering a true "silver-haired society." This demographic shift has profound impacts on various aspects of society, especially in the field of elderly care, where traditional models face significant challenges [1]. The growing and diversified needs of the elderly population require innovation in home-based care models, particularly in healthcare services.

Currently, many elderly individuals still primarily rely on their families or hire caregivers to assist with their daily needs, a model commonly referred to as family-based elderly care. However, this situation is evolving as the elderly population continues to grow, and lifestyle changes further complicate the care process. The increased number of elderly individuals, combined with shifting societal norms, has placed significant pressure on family members responsible for caregiving. This challenge is particularly evident in healthcare management, as many elderly individuals must visit hospitals for medical attention. The shortage of medical resources exacerbates this issue, often leading to difficulties in accessing timely care and negatively impacting the quality of life for elderly individuals.

In recent years, information technology has developed particularly rapidly, especially the Internet and smart phones, which are used by almost everyone, and online medical treatment has gradually become a new way of seeing a doctor. Now many elderly people have begun to use this kind of online medical service, mainly through mobile phones or computers, and can see a doctor without going out, and do not have to worry about the hospital being too far away or queued up for a long time.

A variety of digital technologies and intelligent solutions, such as increasingly popular online medical platforms, can make home care more convenient and services more comprehensive. This new care model addresses the practical challenges faced by the elderly, such as difficulties in accessing care and managing health, while also unlocking greater potential for the entire elderly care industry [2].

The role of online healthcare in home-based elderly care is examined to determine its effectiveness in helping elderly individuals manage their health. Additionally, the study explores ways to enhance the convenience and accessibility of online medical services through policy and technological innovations. Through this research, the potential benefits and improvements of integrating online healthcare into home-based elderly care are assessed. The aim is to provide a theoretical foundation and practical recommendations to innovate elderly care, ensuring more effective health management for the elderly, while also contributing to the development of the silver economy.

This study is of great theoretical significance, and it mainly focuses on the new direction of online medical care that few people are concerned about now, especially the impact of home care on the elderly. Through this research, the theory of digital health management has been made more comprehensive, offering a new solution to the challenges of aging. From a practical application perspective, the identified issues and proposed recommendations provide valuable insights for the government in formulating policies that can accelerate the development of digital health technologies.

2. Literature Review

2.1. Silver Economy and Home-Based Elderly Care

There are more and more elderly people around the world, people are beginning to pay attention to the concept of "silver economy", which is simply an economic activity and service designed for the elderly. Like China and South Korea, the problem of aging is becoming more and more obvious, and the demand for services for the elderly is also growing. Recent studies have found that with the increasing elderly population, there is a growing need for new approaches to elderly care, such as home-based care models [3].

For example, Wang and his team published a study in 2025 that talk specifically about how digital technology can change the pension system, and they found that new things like smart health technology are particularly helpful to improve family care. These new technologies make it easier and more efficient to care for the elderly, and the elderly do not always run to the hospital, stay at home and get good medical services, and can adjust the way of care according to the different situations of each person [4].

2.2. Online Healthcare and Telemedicine

Online and telemedicine are becoming more and more common, and this way of seeing a doctor has brought convenience to many people, especially the elderly. Because of this new method, patients do not have to run a hospital or clinic specifically, as long as they can contact a doctor at home through a mobile phone or computer. For those elderly people who do not have good legs or feet, or people living in more remote rural areas, it is much easier to see a doctor.

Moreover, studies like Jin and Qu investigate the relationship between intergenerational support, technology perception, and the intention to seek medical care online among Chinese elderly individuals [5]. This study shows that promoting trust in technology by intergenerational support systems is a key factor influencing the willingness of older people to receive online health care services.

2.3. Technological Innovations in Elderly Care

The technology used in elderly care is not just about seeing a doctor online. There are a lot of new things that are changing the industry, such as the elderly who can use smart watches to monitor

their physical condition, and some specially designed health management software can also help. These technologies make the matter of old age more convenient and smarter. According to Cai et al, the rise of smart cities and home medical devices is revolutionizing healthcare delivery by improving the efficiency of care provided to elderly individuals [6].

Lei and Zhang discussed an important topic in their 2025 study, which is how big data can help improve care services for the elderly [7]. They found that by analyzing large amounts of data, they can better understand the changes in the health of the elderly, so that care institutions can adjust their way of working according to these findings, so that the elderly can get a better care plan for their actual situation.

2.4. Challenges in Online Healthcare for Elderly Adults

There are many benefits to seeing a doctor online, but there are also some problems to be faced. The biggest problem is the digital divide, and many elderly people do not use mobile phones and computers, or do not know how to access the Internet, so it is difficult for them to enjoy the convenience of online medical services. As Wang et al. note, trust in professional medical advice delivered online is also a barrier to the widespread adoption of telemedicine among older adults [8].

Yu et al. discussed some of the applications of social media in healthcare, particularly in urology care, and they looked at how these platforms can be used to improve treatment and management [9]. While web-based tools like social media do bring some health knowledge to older patients and more people to disease and treatment options, there are also some issues, such as the fact that the health information disseminated online is not necessarily accurate, and sometimes there are some wrong content that can have a bad impact on patients.

2.5. Policy and Practical Recommendations for Enhancing Online Healthcare

Policy recommendations for enhancing the effectiveness of online healthcare in elderly care have been discussed by several scholars. Savira et al. conducted a cost analysis comparing telehealth and in-person delivery of occupational therapy home visits [8]. Their findings suggest that telehealth services offer significant cost savings, but they also highlight the need for tailored policies to address the specific needs of elderly patients.

3. The Impact of Online Healthcare on the Convenience of Home-Based Elderly Care

3.1. The Current Status and Popularity of Online Healthcare

In recent years, both in China and many other countries around the world, online medical care has become more and more important, has become an indispensable part of the medical system. This new way of seeing a doctor has made a big change in medical services, now people are more convenient to see a doctor, more flexible schedule, and less money than before.

Nowadays, many elderly people are particularly helpful for them because of inconvenient mobility or long-term illness, and it is not easy to go out to see a doctor and take a car. A recent study has found that almost 63.2% of the elderly in China have tried to see a doctor online for consultation, which shows that more and more elderly people are beginning to accept and use this online medical service [9]. The first is that the Internet is becoming more and more user-intensive, and the network infrastructure has been upgrading and improving over the years. Second, there are many simple health care platforms that the elderly will not find too difficult to use [10].

In areas with low Internet penetration or less technical accessibility, online health care adoption remains relatively low. Moreover, trust in online health care providers remains a challenge, as some older adults may be skeptical about the quality and reliability of virtual counseling compared to traditional personal visits.

3.2. The Role of Online Healthcare in Home-Based Elderly Care

The traditional home care model relies heavily on home care providers or professional care providers to deliver health care. However, this model often faces challenges, such as burnout among caregivers, lack of medical expertise, and limited access to health care resources [11].

Now online medical treatment brings great convenience to the elderly, who can get professional guidance and medical services from doctors without going out. Especially those with chronic diseases such as high blood pressure and diabetes, because they usually need to go to the hospital for frequent check-up. Older people can easily contact the doctor with their mobile phones or computer videos, and there are uncomfortable places where they can immediately ask the doctor, and they can get prescriptions or checklists directly from the doctor online, which saves them the time and effort of running to the hospital.

Now many online medical platforms have prepared health monitoring equipment for the elderly, so that they can measure their own health indicators at home, blood sugar, and heartbeat. The measured data will automatically pass to the doctor, and the doctor can know the health condition of the elderly without meeting, and if they find anything, they can adjust the medication or treatment plan in time.

3.3. The Impact of Online Healthcare on the Transformation of Home-Based Elderly Care Models

The main argument of this paper is that integrating online medical services into the family-based elderly care model can bring numerous benefits to the elderly and improve the overall medical system. Unlike the past model, which primarily relied on nursing homes for elderly care, a more flexible approach can now be adopted, allowing elderly individuals to be cared for at home in a more convenient and effective manner. Online healthcare enables the elderly to consult with doctors without leaving their homes, facilitating a more rational distribution of medical resources.

Online health care brings a lot of convenience to people, especially for those who usually find it difficult to go to the hospital or hang up the emergency room. This service allows the elderly to consult the doctor on their health problems at any time and place through mobile phones or computers, and can also pay attention to changes in their physical condition at any time, so that they can find some minor problems early, and will not be dragged to the level of hospitalization. For example, if the elderly often measure blood pressure to measure blood sugar, and then send the measured number to the doctor, the doctor can give advice in time, so that they will not suddenly have particularly serious health problems.

Now the elderly do not always run to the hospital, save a lot of back and forth costs, do not often stay in the hospital, so that the total cost of care can spend a lot of money. Compared with the traditional way of care, this method of online medical treatment is indeed more economical, especially for families with less good economic conditions at home, the cost of long-term care of patients will not be so headache.

4. Analysis of Influencing Factors and Policy Recommendations

4.1. Analysis of Factors Influencing the Convenience of Online Healthcare

4.1.1 Technological barriers

This paper mainly discusses the technical problems encountered by the elderly when using online medical services. Now, although the Internet conditions are much better than before, in some places, especially in rural areas and less developed areas with less developed economies, the Internet is still not very convenient, and many elderly people do not have smartphones or computers. If the network signal is good and bad, the elderly will be very troublesome to see a doctor online, so that the online medical platform will not be easy for them, and the actual effect will be discounted.

4.1.2 Digital literacy and user interface design

Many older adults may be unfamiliar with navigation digital platforms, which makes it difficult for them to schedule appointments, communicate with health care providers, or access health information. User interface design plays a vital role in this regard; platforms with intuitive, user-friendly design can significantly reduce the learning curve for older people, while complex or poorly designed interfaces can lead to frustration and disengagement.

4.1.3 Trust and perception of online healthcare

Many older people are less likely to use digital health care services, mainly because they are worried that their personal data and medical information are not safe online. Another problem is that the advice given by online medical platforms is not necessarily accurate, which also makes the elderly feel less comfortable. Those who have never seen the doctor online are more distrustful of these new services, and they feel that these things are not reliable, so they are not willing to try it even if they are convenient.

4.1.4 Healthcare provider preparedness

Healthcare professionals must be adequately trained in telemedicine practices and equipped with the necessary technology to provide effective counseling. Lack of adequate resources for familiarity with digital healthcare platforms or managing virtual consultations may undermine the overall experience of older patients and their willingness to rely on online medical services [12].

4.2. Policy Recommendations to Promote the Convenience of Online Healthcare

4.2.1 Improvement of digital infrastructure

The paper argues that governments should focus first on improving internet connectivity, especially in rural areas where they are not well connected, so that older people can be more stable online. Give seniors access subsidies or cheaper packages can make them spend less, so they are more willing to use online medical services and use digital health platforms more often.

4.2.2 Digital literacy programs

In order for the elderly to keep up with the pace of the digital age, governments and hospitals should offer digital literacy courses specifically for the elderly. These courses can teach them how to use electronic devices such as smartphones and tablets, and teach them how to register online and check the reports [13].

4.2.3 Simplification and customization of online healthcare platforms

In order to make it easy for the elderly to use these online medical services, the platform needs to make the interface easy to understand, such as adding a voice help function, and designing the navigation menu more clearly. In addition, the platform can also add some practical functions for the elderly, such as helping them manage chronic diseases or remind them to take medicine, which can improve the usefulness of the platform and make more elderly people willing to use these services.

4.2.4 Strengthening trust in online healthcare

To build trust in online healthcare services, it is essential that healthcare providers and platforms establish transparent approaches to patient data security and privacy. Public events can also raise awareness of the benefits and reliability of online counseling, and healthcare providers should ensure that they maintain high-quality standards in virtual counseling.

4.3. Optimization of the Home-Based Elderly Care Model and Future Outlook

4.3.1 Integration of smart technologies into home-based care

Now many families are considering how to better care for the elderly, in fact, smart technology can help a lot. For example, the common health monitor on the market, as well as the smart home system installed at home, coupled with the health tracking equipment such as the bracelet worn by

the elderly, these can make it easier for the elderly to manage their health. These devices also have the advantage that doctors and family members who take care of the elderly do not have to be around, and can check the health of the elderly at any time through mobile phones or computers [14].

4.3.2 Personalized and preventative care

Online healthcare allows for more personalized and preventative care, which is essential for managing the health of older people. With regular online consultations, remote monitoring of vital signs, and tailored health management plans, older people can receive early intervention to prevent serious health conditions.

4.3.3 Collaborative care models

Now that the health care system is getting better and better, more people may participate in the care of the elderly in the future. Not only doctors and nurses, but also family members, carers who specialize in caring for the elderly, and even some organizations in the community can cooperate with each other, so that they can provide better care services to the elderly [15]. Those online medical platforms can actually help them, they can see the latest health conditions of the elderly, and it is more convenient for everyone to communicate, and ensure that the care work will not be interrupted, which will be better for the elderly.

5. Conclusion

Through research, the use of online health care does help the elderly, who now have easier access to medical care, do not run the hospital regularly, and can better manage their health. Although the elderly may encounter some difficulties, such as not using mobile phones, not believing in online medical care, or the Internet at home, in general, online health care does provide new options for the elderly to see a doctor, and solve many practical problems.

The main point of this study is that integrating online medical treatment into the home care model can significantly reduce medical expenses, prevent unnecessary hospitalizations, and provide a more suitable care plan for elderly individuals. Online medical treatment makes healthcare more convenient and efficient, particularly for the elderly, as they can receive medical assistance at home without the need for frequent hospital visits, thereby maintaining good health and continuing to live independently.

The study does give some useful findings, but it also has shortcomings, mainly in urban areas. More research can be done next to see how rural elderly people use online health care, to understand the long-term changes that this approach to health, and what policies the government can put in place to help the elderly better use of these services.

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