

An Research Analysis on the International Healthy Elderly Care Industry

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Abstract: The population aging has become an irreversible phenomenon that the world is facing. The country has actively deployed the development tasks of aging care services during the 14th Five Year Plan period, with the elderly care industry in cities such as Shanghai, Beijing, and Chongqing developing rapidly. Data shows that the market size of China's elderly care industry reached 8 trillion yuan in 2022, and it is expected that the market size may reach 15 trillion yuan by 2030. The development of the elderly care industry has attracted capital attention, more and more enterprises have joined in the industry, segments such as elderly nursing, smart senior care and elderly products are the first to be developed.

Keywords: Healthy Elderly Care Industry; Population Aging; Capital Market

1. Introduction

The proportion of elderly people aged 65 and above in China in 2021 is 14.2%, and the aging process is accelerating. The proportion of elderly people aged 65 and above in 12 provinces exceeds 14%, among which the top five provinces with the highest degree of aging are Liaoning, Chongqing, Sichuan, Shanghai, and Jiangsu. The population aging has changed the supply and demand relationship of labor, increased the burden of social senior care. Solving the many dilemmas faced by empty nesters has become a social challenge, population ageing has put greater pressure on society in terms of health care, economy and demographics.

The combination of nursing services and medical services is the main direction for the development of the elderly care industry. It will develop towards the direction of branding, large-scale, and autonomy, and the level of specialization and refinement of elderly care services will be further improved. Smart senior care is a top priority in the development of elderly care service models, covering various forms of elderly care, forming a smart and healthy elderly care ecosystem, and helping to effectively connect and optimize the allocation of elderly care resources

2. The Development of Global Aging

According to United Nations statistics, the proportion of the global population aged 65 and above was 9.3% in 2020, with high-income and middle-income economies accounting for 18.4% and 10.8% respectively; Japan, Italy, and Portugal ranked among the top three countries in terms of aging, with 28.4%, 23.3%, and 22.8% of the population aged 65 and above in 2020 respectively. China ranked 63rd in terms of aging, with a population aged 65 and above accounting for 13.5% in 2020, which was higher than the global average of 9.3%. In the United Nations population prediction program, it is expected that the average life expectancy of the global population will reach 81.8 years by 2100, among which the average life expectancy of high-income economies will exceed 90 years

2.1 China's Population Structure and Changes in the Elderly Population

In 2001, the proportion of the population aged 65 and above in China exceeded 7%, indicating that China has entered an aging society. In 2021, the proportion of elderly people aged 65 and above reached 14.2%, and in recent years, the pace of population ageing in China has accelerated significantly. At the end of 2021, the total population of China was 1412.6 million, among which the elderly population aged 65 and above reaching 200.56 million, indicating a large scale of elderly

population.

2.2 Population Structure and Elderly Population Distribution in the United States

In terms of age composition, the proportion of the population aged 0-14 in the United States in 2020 was 18%, 65% of the population aged 15-64, and the population aged 65 and above was 54.796 million, accounting for 17% of the total population, there was an increase of 14.64 million compared to 2010, indicating that the United States has entered an aging society. From the perspective of gender structure, in 2020, the male population in the United States accounted for 49.5%, with a population of 163.095 million, and the proportion of women was 50.5%, and the population was 166.389 million. According to the latest US census forecast, the number of people over 65 years old will reach 74 million by 2030.

2.3 Population Structure and Distribution of Elderly Population in Japan

From the perspective of age composition, the proportion of the population under 14 years old in Japan in 2021 was 11.8%, 59.4% of the population aged 15-64, and the population aged 65 and above is 35.547 million, accounting for 28.9% of the total population. The year-on-year growth rate showed a decreasing trend year by year, but it still increased by 6.734 million compared to 2010, indicating that Japan entered a super aging society. From the perspective of gender structure, the proportion of male population in Japan in 2021 was 48.7%, with a population of 61.459 million, and the proportion of women is 51.3%, and the population was 64.731 million.

3. Development Status of Global Healthy Elderly Care Products and Services

Domestic and foreign enterprises have applied new generation information technologies such as big data, cloud computing, the Internet of Things and artificial intelligence to develop many new elderly care products and services.

3.1 Health Monitoring System

The Tokyo National Global Health and Medical Center has developed an application called “Lucky Seven Gods” to assist users in health management. The data generated by users using blood pressure monitors, pedometers, and body composition monitors will be sent to the APP with the “Lucky Seven Gods” installed and detected in the cloud. Users can obtain health test results by interacting with cartoon characters of deities. If the user misses the interaction, the gods will express disappointment, thereby maintaining the users’ interests in health management. According to researchers, due to the function that the users are able to receive comprehensive explanations and feedback from the application, even elderly users can maintain interest in electronic devices and persist. Currently, the launch rate of this app is less than 1%, far lower than similar applications.

3.2 Intelligent Home Devices

Researchers of New York University had noticed that it is particularly difficult for dementia patients to independently complete dressing movements, so they have developed an intelligent dressing system called DRESS to help dementia patients dress independently, which can track the dressing process based on sensors and image recognition technology. The barcode on the clothing can identify the clothing type, users’ position and direction progress, and the skin conductivity sensor worn by patients can be used to monitor their stress levels and related frustration. Nursing staff can record audio in advance to guide patients in dressing, encourage and comfort patients. If the system detects problems or excessive stress levels existing in patients during the dressing process, it will remind nursing staff to come to the scene for assistance.

A Swedish company named Robotics Care has developed a fully automated intelligent shower room called Poseidon for the elderly to solve the difficulty of bathing. Elderly people can enter the shower room by sitting on the automatic retractable chair provided by Poseidon, avoiding the embarrassment of needing others’ help to enter the bathroom. Poseidon is equipped with a waterproof and heat-resistant control panel, which can intelligently adjust the water temperature and pressure. The buttons are simple and easy to remember, which are suitable for operation by the elderly. In addition, Poseidon is also equipped with 10 showerheads inside, which can wash the body in different forces and from different angles. There are also

4 shower gel nozzles that can accurately spray shower gel onto key parts of the body, making the entire bathing process fully intelligent and automatic, without the need for auxiliary personnel to participate.

3.3 Intelligent Daily Necessities

Mitsui Fuji has integrated sensors into textile fabrics to create the wearable smart clothing brand Hamon. Weaving conductive fibers into clothing fabrics can detect users' respiratory rate, heart rate, body temperature and other biological sign information, as well as data such as climatic temperature, humidity, and exercise speed. By installing signal transmission devices on smart fabrics and other devices, the collected data can be sent to mobile devices or the cloud for management.

Triple W in Japan has developed a non-invasive health wearable device called DFree, which applies harmless ultrasound sensors to detecting changes in bladder volume and then predicting urination time by using algorithms, finally users can receive urination reminders through mobile clients. Elderly people, children, and disabled individuals with bladder incontinence can use DFree as an alternative to disposable diaper pads and medications.

3.4 Rehabilitation Aids

Medi VR, founded by Japanese cardiologist Masahiko Hara, is committed to developing rehabilitation systems for stroke patients using VR/AR technology. Stroke or exercise impaired patients often require a large amount of repetitive training during the rehabilitation process, which is not only time-consuming but also makes the patient bored. Professor Hara proposed a VR based rehabilitation plan for training content. In his plan, patients can complete training by chasing monsters in the virtual world. In this way, doctors and therapists can focus on the treatment plan itself, making it easier for patients to persist. More importantly, for remote areas lacking therapists, hospitals can promote equal distribution of medical resources by leasing rehabilitation equipment to patients.

4. Current Situation of Global Healthy Elderly Care Enterprise Layout

Under the model of community and home elderly care, elderly care enterprises have shown a dispersed characteristic and have not formed a leading industry. Under the institutional elderly care model, elderly care institutions are mainly classified into two categories: real estate and pension insurance.

4.1 Domestic Enterprises' Layout of the Elderly Care Industry

Vanke Group launched a strategic layout for the elderly care industry in 2012. After years of development, its elderly care projects have been successfully operated in many cities such as Beijing, Shanghai, Hangzhou, Qingdao, Chengdu, and Guangzhou, and have been achieved high occupancy rates. Focusing on the development of elderly care products, the elderly care enterprises developed by Vanke Group serve the needs of the all-age elderly population with three product types: Community embedded elderly care centers (CECCs), Urban elderly care centers (UECCs) and CCRC Sustainable care communities (SCs).

The medical care business of China Merchants Shekou Industrial Zone Holdings Co., Ltd. mainly includes boutique specialized hospitals, mid to high-end elderly care services, enterprise health management and smart community health. Currently, the Meilun Health Center has been established and operated in four cities, including Shenzhen, Wuzhen, Qidong and Binjiang. The elderly care business product line covers mid to high-end nursing homes and dynamic elderly apartments. It has two elderly care brands, "China Merchants Guanyi" and "China Merchants Gaolize", and has settled in four cities: Guangzhou, Shenzhen, Wuhan and Hangzhou.

A wholly-owned subsidiary of the listed company Nanjing Xinbai (600682. SH) named Ankangtong Holdings Co., Ltd. was established in Shanghai in 1998, which has been cultivating home and community smart elderly care for 23 years. It is the earliest intelligent elderly care enterprise in China, with the largest number of services and projects for the elderly, and the widest range of services. Up to now, Ankangtong has covered 20 million domestic elderly users in 23 provinces and cities such as Shanghai, Beijing, and Guangdong. It has undertaken the construction and operation of over 200 government key projects, and has accumulated over 100 smart elderly care command centers and over 600 community service centers for

local governments.

Shanghai izhaohu is the first smart elderly care service enterprise in China based on K-AID (Knowledge, Artificial Intelligence, Internet of Things and Big Data) fusion technology. K-AID technology fully supports the new model iACC (Intelligentized, All-inclusive Care Community) intelligent full coverage care for the elderly in the “pay for results” community. Shanghai izhaohu elderly care services has covered most areas of Shanghai, and are located in over 500 communities in countries and cities such as Japan, South Korea, Hong Kong, Taiwan, Hangzhou, Ningbo, Wuhan, Beijing, Hangzhou, Jinan, Chongqing, Lanzhou, Nanchang, Yantai, and Hohhot.

Fortune Care (Shanghai) Medical and Elderly Care Service Co., Ltd. was established in 2011. Its main business scope includes providing community elderly care services for the elderly, such as community foster care, home care, domestic service, self owned equipment leasing, medical consulting, and engages in technology development in professional fields such as intelligent technology and network information, develops sales of daily necessities, medical equipment, mechanical equipment, etc.

4.2 International Enterprises' Layout of the Elderly Care Industry

The Nichii Gakkan Company was established in August 1973 and is the top comprehensive elderly care service company in Japan. The business scope of Nichii Gakkan Company is not limited to nursing, but also includes elderly universities, rental of elderly care products, and rental and sales of elderly housing. Up to now, Nichii Gakkan Company has opened three branches in China, located in Beijing and Shanghai, which are highly aging areas.

Brookdale Senior Living, Inc. was founded in 1978 and is headquartered in Brentwood, Tennessee. The company operates elderly living communities.

Capital Senior Living Corporation provides advanced living services for the elderly, including independent and assisted living, as well as home nursing services. Its independent living services include daily meals, transportation, social and entertainment activities, laundry, housekeeping, and 24-hour staff, and receive health checks, regular special services, dietary and similar plans, as well as ongoing exercise and fitness courses.

Five Star Senior Living was founded in April 2000 and is engaged in the elderly living business. It operates through the following components: elderly living communities, rehabilitation and health. Elderly communities own or manage accounts in other independent living communities, assisted living communities, and centrally regulated skilled care facilities to provide housing and services for elderly residents. The rehabilitation and health department provides physical, occupational and other specialized treatment services in the inpatient and outpatient departments.

Conclusion

According to international standards, China entered an aging society in 1999 and will enter a deep aging society from 2024 to 2026. The development of the elderly care industry is urgent and has potential. It is expected that by 2027, the population aged 65 and above in China will reach 118.37 million. Community elderly care is an important carrier for future elderly care, and it is still in the exploratory stage. Elderly care services may become the focus of competition for developers in the future.

References

- [1] Xu K, He XY. Research on the Development Trend of China's Population Structure in the New Era: Based on the Analysis of the *Communiqué of the Seventh National Population Census* [J]. *Journal of Chengdu University of Administration*, 2022: 33-46+117.
- [2] Xiaorong Wang XR, Liu Y, Jia WY. Research on the Construction Model of Community Smart Home Elderly Care System - Discussion on the Construction of Existing Community Virtual Platform in Tianjin [J]. *Journal of Architecture*, 2020: 56-59.
- [3] Zhou Y. Research on the Changes in Consumer Demand and Industrial Development Strategies of the Elderly under the Trend of Aging [J]. *Shandong Textile Economy*, 2022: 20-22.