

The Implication of Pension Industry of Japanese for Chinese: Evidence from Nurse and Mode

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Abstract. The China has gradually entered the aging society, hence the way to better meet the needs of the elderly population has become a very important topic. Since Japan entered the aging earlier than China and has achieved certain success, so China can derive its own enlightenment from these experiences of Japan. This study will compare the problems of aging that both China and Japan have faced in terms of the data mainly collected from the national platform and previous literature. The aim is to dig out which solutions of the Japan regarding to this issue can bring to China. According to the analysis, China, facing a shortage of human care workers, could replace some of their jobs with artificial intelligence, as Japan has done. Meanwhile, China can encourage nursing homes to develop some incentive mechanisms like those in Japan to stimulate the enthusiasm of the elderly for life. The significance of this paper is to help China better cope with the aging of the population and provide a better living environment for the elderly. These results shed light on guiding further exploration for pension industry.

Keywords: Aging society; Japan; China; pension industry.

1. Introduction

In demography, aging is a change in the age structure of a population that depends on a rising proportion (share) of older persons. When the proportion of the elderly exceeds a certain value, the population is the elderly. There are many age ranges for population size, but the most common is proposed by the United Nations. On this scale, when the proportion of elderly (65+) is below 4%, the population is young; when it is between 4% and 7%, the population is mature; when it is above 7%, the population is old [1]. In 2000, the largest ratio of mankind older than 65 years old was 18%, and it is expected to reach 38% [2]. In this case, it indicates that the aging of the population has become a global trend, and China also faces the same problem. The pressures of China's aging population are already starting to show. In the 22 years from the third census in 1982 to 2004, China's elderly population increased by 3.02 million per year on average, with an average annual growth rate of 2.85%, higher than the 1.17% growth rate of the total population, which is expected to reach the value of 17.17% in 2020 [3].

The immediate factor contributing to population aging is the reduction of mortality and birth rate. Since the 1980s, in order to effectively control the rapid growth of population, the Chinese government has adhered to the implementation of the family planning policy, so that the birth rate of China's population has been greatly reduced. As a consequence, China's population has been maintained at a relatively low growth level [4]. As the aging population increases, China needs to pay attention to the elderly care industry and learn from other countries to improve the development of the elderly care industry of China. Under this situation, Japan can be an ideal model. Since Japan is a developed country and has established a relatively complete pension system, and the Chinese and Japanese both are the yellow race, so that their physiques will be more similar than in other countries such as the United States. Through the study of Japan and the combination of China's national conditions, a plan suitable for China's development can be drawn to promote the development of China's pension industry.

This paper argues that Japan's approach to solving the pension problem can bring inspiration to China. The first part of this article is aimed to show the shortage for the nursing in China. The second part will illustrate advantages and disadvantage of a case of pension from Japan, illustrate a case of pension from China, and point out the lessons that China's pension can learn from it. For the third

part, this article will demonstrate and clarify the limitation as well as propose future outlooks. Eventually, a brief summary will be given.

2. Shortage of nursing in China

As a matter of fact, China is still on the verge of a severe nursing shortage. For the sake of assessing whether there is a shortage of nurses, it is necessary to obtain data on the demand and supply of registered nurses. A shortage occurs when demand exceeds supply. The WHO has set a criteria for judging the nursing ability, i.e., one nurse for every 500 people. As of the end of 2008, there were 1.65 million nurses in China, which means that China needs 2 million nurses to catch up with global standards. Moreover, the shortage of care workers continues to expand [5]. The problem with increasing nursing shortages is that more and more nurses are leaving. For those leaving the industry, almost half cited low wages as their main reason [6]. According to Table. 1, the registered nurses less a lot than other countries, includes Japan but excldes India. Therefore, this tables points out that China faces a very serious shortage of nurses. Moreover, over time, the number of registered nurses in 2008 was even lower than it was in 2001.

Table 1. The statistical of Health workers evolution for different countries.

Country	Physicians ratios ×1000	Nurse ratios×1000	Nursese numbers	Year
China	1.06	1.05	1358000	2001
	1.55	1.11	1426339	2006
	1.40	1.00	1301240	2008
	1.42	1.38	1854818	2011
India	0.60	0.80	865135	2003
	0.60	1.30	1430555	2011
Japan	1.98	7.79	993628	2002
	2.10	9.50	1210633	2008
	2.06	4.14	531210	2011
	2.30	12.12	704332	1997
The U.K.	2.30	12.80	740431	2008
	2.74	10.30	621755	2011
The U.S.	2.56	9.37	2669603	2000
	2.60	9.40	2669603	2008
	2.67	9.82	2927000	2011

Japan is also facing the problem of a large number of care workers. Although the number of nurses in Japan increased by 30% between 2002 and 2014, nurse employment increased from 1,163,393 to 1,506,380; however, this was not enough to meet the nursing needs of 1,623,800 in 2014. By 2025, the need for care is projected to rise to 1.844 million. To be worse, the supply of nurses is expected to remain short of this demand as new nurses leave the profession for salary and other reasons, just like China. According to 2012 statistics, about 191,000 registered nurses joined the profession, including about 47,000 newly qualified nurses (about 144,000 nurses with rejoin or transfer experience). However, around 161,000 people left the industry, with higher turnover rates in larger cities. Across Japan, this nursing shortage has created some challenges for healthcare delivery. It is even more problematic as the gap between supply and demand is not expected to close anytime soon [7].

In addition to finding ways to increase the number of carers, there are other ways to solve this problem. For example, some companies in Japan are trying to use robot to replace caregivers to do some simple or repetitive tasks, so that caregivers can have more time to do other tasks, and this idea already had some success. To this end, Japan has developed a prototype of a new robot called RIBA, which has a humanoid arm with tactile sensors that play an important role in sensor feedback and detection of operator commands (seen from Fig. 1) [8]. Therefore, China can try to use the robots to replace caregivers to do some simple or repetitive tasks like what Japan do.

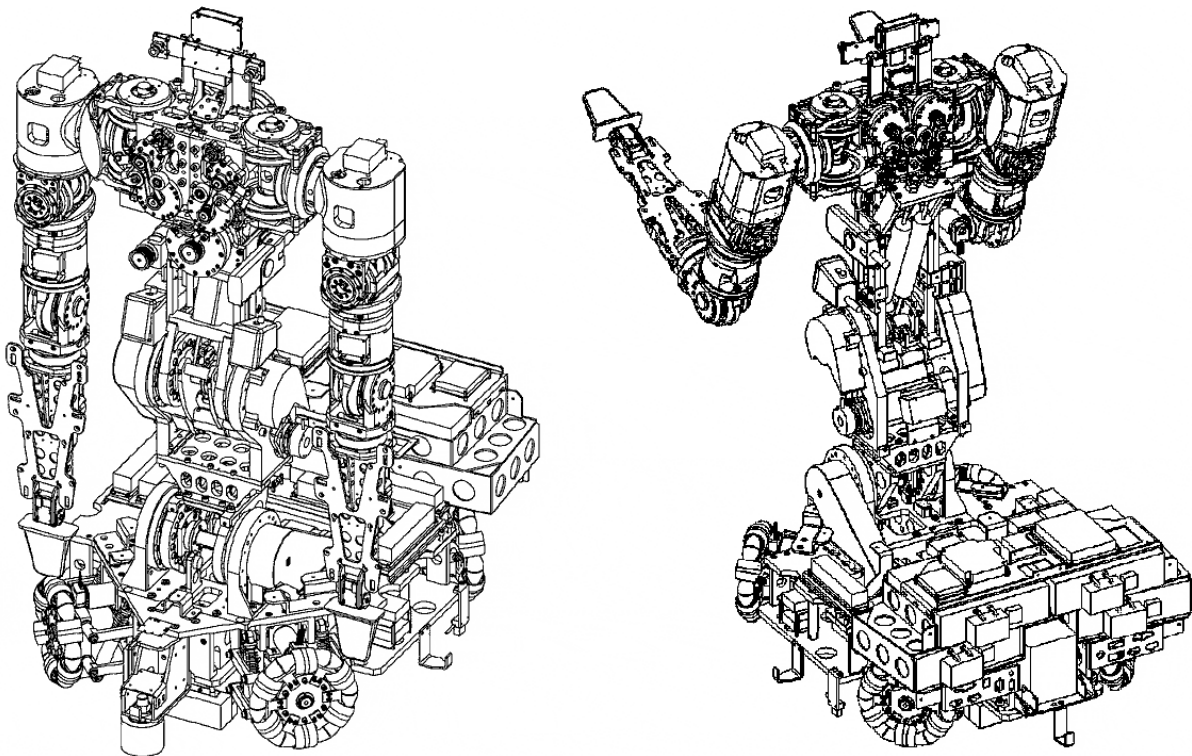


Fig. 1 A sketch of the RIBA [9].

3. Modes of Pension case of Dandelion

In Aichi Prefecture, Japan, there is a nursing home called "Dandelion Nursing Center" as large as an amusement park (the external picture of it is shown in Fig. 2), with natural hot springs, karaoke, hobby classrooms, and so on. One of the problems of the elderly is that they have less sense of value. Besides, some elderly people even feel that they are living a burden on their children, because they do not have the ability to earn money via work and strongly rely on their children to support themselves. Therefore, the dean and staff of this dandelion nursing center designed a currency called SEED, which is modeled after the Japanese currency and can be freely circulated in the nursing home. At the same time, SEED means seed, which represents a new beginning and hope.

The staff set up five denominations of 100, 500, 1000, 5000 and 10000, and issued an initial fund of 500 yuan to each elderly person. As long as the elderly actively participate in rehabilitation training or cooperate with nurses, they can obtain SEED coins ranging from hundreds to thousands. If the elder people go out for a walk of 100 meters in the morning, they can get 100 SEED coins. They can also earn hundreds of SEED coins for shaving and shampooing themselves when they wake up. The elderly can even earn money by doing things they like. To be specific, they can get SEED coins as rewards if they participate in various skill training courses, dancing courses and even singing songs in karaoke every day. There are also recreational activities such as water ballet in summer and hot springs in winter. In total, there are as many as 250 ways to earn money. Moreover, the elderly can use this money to buy what they want, such as some desserts, daily necessities and free outside travel, instead of relying on real-world currency. In this case, they can reduce the financial burden on their children, and at the same time give the elderly a sense of value and improves the mental outlook of the elderly because they can earn money on their own. Owing to the mental outlook and health status of the elderly have been significantly improved, the prevalence of dementia has been greatly reduced. Thus, Dandelion Nursing Center looks more like a fully functional elderly activity center, which is called "Elderly Disney" by the outside world [10].



Fig. 2 The external environment of Dandelion Nursing Center [10].

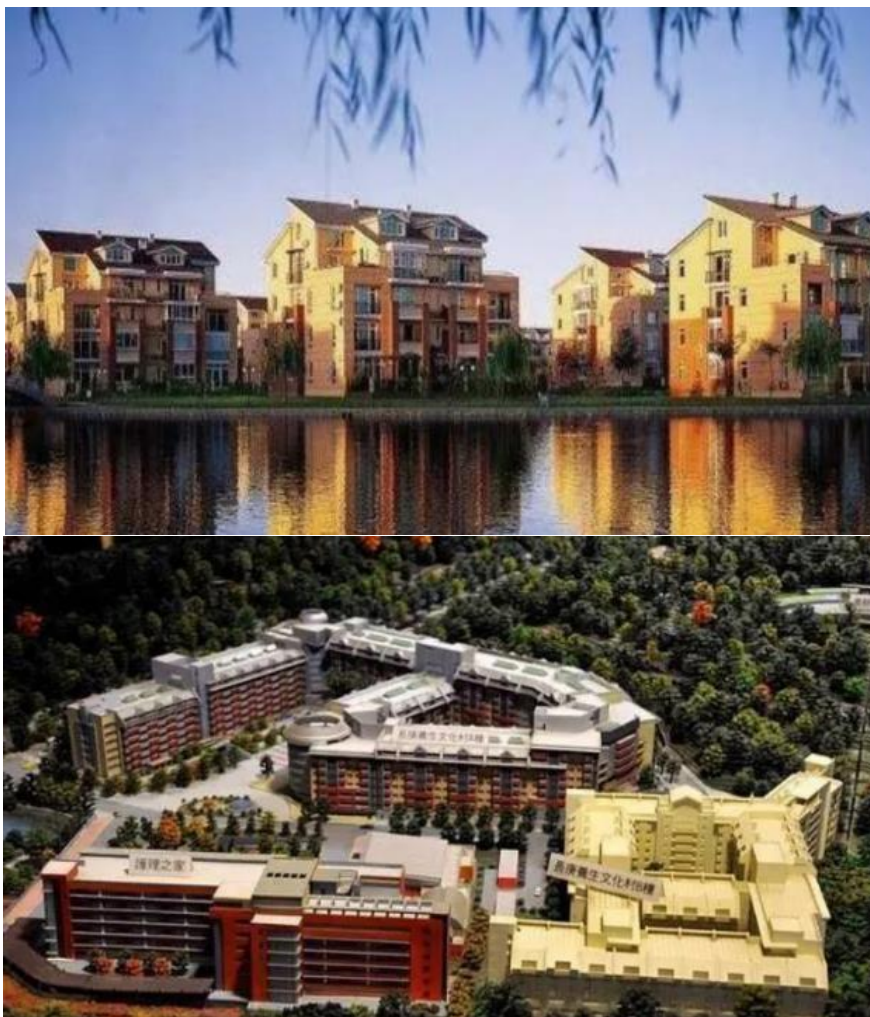


Fig. 3 The external environment of the Beijing Oriental Sun City [11].

By contrast, Beijing Oriental Sun City is a Chinese nursing home with relatively complete facilities, including a hospital, various sports equipment, and a hot spring swimming pool, as illustrated in Fig. 3 [11]. There are also entertainment venues such as pottery halls, cafes, chess and card bars, KTV,

performing arts, libraries, and universities for the elderly. Another example for nursing home in China is the Chang Gung Health Culture Village in Taiwan, which has a spacious and elegant health environment. There are 17 hectares of green grasslands, where the elderly can experience wild farms, stroll along the leisure plank road, stay away from the hustle and bustle of the city, immerse themselves in nature, and provide the best Healthy environment. Chang Gung Health Culture Village also has complete infrastructure, such as supermarkets, bookstores, banks and other commercial areas. There are also snack bars, Chinese and Western restaurants, banquet halls and other dining areas, providing meal selection services other than group meals. Moreover, Chang Gung Health Culture Village also has gymnasiums, health clubs, spa pools, swimming pools and other leisure facilities to enhance health and fitness. In addition, there are also hospitals.

According to above descriptions, these Chinese nursing homes have very complete infrastructure and the physical health of the elderly, but they do not provide spiritual support like currency (e.g., SEED), which can stimulate the sense of value of the elderly, and they have no way to make money by their own labor [11]. However, the Japanese nursing home pay more attention to the mental health, e.g., use SEED to stimulate the old people's enthusiasm for life and make more new friends.

4. Limitation & Future outlooks

The limitation of this paper is that the aspects of analysis are too small, and some data is based on relatively early literature, because there is a lack of survey results in recent years. It is hoped that in the future, more people will pay attention to the needs of the elderly and learn from Japan and other countries that have entered the aging society earlier than China. Moreover, aging of population has become the inevitable future trend of China.

5. Summary

In conclusion, this paper investigates demand and current situation of China's pension industry based on the previous literatures. Specifically, the current situation of China pension industry with the previous situation of aging population of Japan are compared. Besides, the solutions that Japan made are demonstrated, which can be reference for China. According to the analysis, the first lesson that Japan brings to China is to replace part of the nursing workers with artificial intelligence to solve the problem of nursing worker shortage. The second inspiration is the operation model of Japanese dandelion care Center to Chinese nursing homes. The nursing homes ought to both focus on the physical as well as the mental health of them. Moreover, the nursing home of China can create some reward mechanisms (e.g., SEED) to stimulate the elderly's love and enthusiasm for life. Nevertheless, the limitation of this paper is that the aspects of analysis are too small, and some data is based on relatively early literature. In the future, it is hoped that more and more nursing home can find their own and effective way to enhance the elderly's sense of the value and enthusiasm for life. In addition, more enterprises ought to invent some robots that could help the elderly live or chat with them to alleviate their loneliness because there is no one to chat with. These results offer a guideline for the way to improve the life of the elderly, which is very important topic in future as China are already on the train to aging society.

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