

Construction of Urban Community Old-Age Security System Based on Big Data Analysis

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Abstract: With the development of science and technology, we have entered the era of big data and Internet, and advanced technology has promoted the innovation and development of China's pension model. Community support for the aged is a way of providing for the aged that has been gradually developed in recent years. It combines the advantages of home support and institutional support for the aged. Although the children of the elderly are busy with work and can't always take care of the elderly, community support for the aged can make the elderly not have to leave home, but also be taken care of nearby, so it is welcomed by more and more families and the elderly. This paper studies the social pension security system of urban and rural residents in China from the perspective of social equity. The purpose is to improve the social pension security system of urban and rural residents, pay attention to the comparative analysis with other social pension security systems, find out the crux of the existing problems, focus on the orderly connection of "new rural security" and "urban housing security", and guarantee the improvement of the living standard of urban and rural residents in their later years, Learn from the advanced models of social pension security in developed countries, and build a relatively complete social pension security system for urban and rural residents.

1. Introduction

Historically, our society has been in a state of high birth rate, high mortality rate and low natural growth rate for a long time. However, in recent decades, with the continuous development of economies and the continuous improvement of medical standards in various countries in the world, many countries in the world have now entered the stage of social development with low birth rate, low mortality rate and low natural growth rate[1]. At present, the number of elderly people in the world has exceeded 100 million, which is more than 10% of the total population of the world. With the great breakthrough in the economic system reform aimed at establishing the socialist market economic system, the traditional family pension model has highlighted its incompatibility with the pension problem in the change of population structure. Influenced by the traditional concept of providing for the aged in China, the family has played the most important role in providing for the aged since ancient times, which is in line with China's long-standing cultural traditions and values[2].

With the development of society and economy, the pension model based on blood relationship is facing a series of impacts. First, the family structure is becoming smaller[3]. Even if the per capita GNP reaches more than 20000 US dollars, developed countries and regions with rich material accumulation are actively exploring strategies to solve the social pension security problems caused by population aging. Objectively speaking, China's social old-age security system for urban and rural residents has just been established, with a short time of establishment and a poor level of old-age treatment[4]. Among the three social pension security systems, the social pension benefits of government agencies and institutions are the highest. The social pension benefits of government agencies and institutions are higher than that of "occupational insurance", while that of "occupational insurance" is higher than that of "urban and rural residents". In addition, there is a gap between urban and rural areas and between regions in the three social pension security

systems[5]. Nowadays, in many cities, most of them are traditional home-based pension mode and institutional pension mode, but both of them have certain shortcomings. If they are at home, their children are often busy with work and have no time and energy to take care of them. Although institutional pension is always taken care of by the service staff of pension institutions, the elderly often feel lonely and unaccustomed without children around, and urban community pension mode is the best combination of these two modes. Under the guidance and policy support of the government, other units, institutions or individuals can be mobilized on the basis of the community where they are located, and the rich resources of the community can be used to provide aged Services, including regular care, spiritual, entertainment and medical and health aged Services. This community-based pension model can not only help the elderly not to leave their families, but also provide thoughtful aged Services. It is a new pension model that is very suitable for China's current national conditions, regardless of their psychological and economic burdens. However, providing for the aged is not only the responsibility and obligation of the family. From a spatial point of view, the family is not the only place to provide for the aged. From a functional point of view, the function of providing for the aged is not complete[6-7].

According to the above contents, the urban community elderly care service security system described in this article refers to the sum of a series of policies, laws, institutions, families and other elements for community elderly care services in China's cities and towns. It includes not only governments at all levels, social service institutions, medical and health institutions, communities and families, but also all laws, regulations and documents related to urban community pension.

2. The Theoretical Basis, Connotation and Function of Social Pension Security for Urban and Rural Residents

2.1 Theoretical Basis of Social Pension Security for Urban and Rural Residents

Throughout the ages, dynasties have changed, and advanced class rule has replaced backward class rule, all in order to satisfy people's desire to establish a fair and harmonious society. Whether Confucius put forward “not suffering from inequality, not suffering from poverty, but suffering from anxiety” or socialism pursued “eliminating exploitation, eliminating polarization and finally achieving common prosperity”, they all hope to establish a fair country [8]. In the long run, in addition to the heavier financial burden of the government, the spiritual life of the cared-for people cannot be satisfied because they are far away from the crowd. Therefore, the “anti-institutionalization movement” appeared in the 1990 s and put forward the theory of community care. Community care means that the cared-for people can live in their familiar environment, and the community can provide them with services, but also mobilize social forces to provide help, so that they will not only be cared for in life, but also feel abandoned spiritually[9]. In other words, community care includes not only the participation of government officials and their subordinate staff, but also the mobilization of the whole community, and even other support outside the community is needed. When advocating the mobilization of different resources, we can find two different forms of orientation. With the development of science and technology, our life has also ushered in the era of big data. Its appearance has not only changed our original traditional living conditions, but also made people's connections closer[10].

Now, smart medicine has begun to enter our lives, innovate and improve the medical system, which is conducive to the development of medical cause. Intelligent medicine integrates patient data quickly and efficiently through network information technology, carries out medical services based on patient data, quickly connects medical staff and patients in a convenient way, does not need patients to go to the hospital for complex queuing inspection and other items, also reduces the expenses of patients for registration, inspection and other expenses, can quickly diagnose the disease, saves human, material and financial resources, and truly realizes medical benefits to the people. In the process of changing roles, gender boundaries are blurred, resulting in emotional conflicts between elderly couples. Therefore, the elderly need to solve these new problems through socialization and constant self-adjustment, and community pension just provides such a platform for

the elderly. Various services provided by the community can help the elderly to better cope with the discomfort caused by the change of roles. Since then, the gap between the rich and the poor has been continuously reduced, the living standards of the poor have been continuously improved, and the national income distribution has gradually become fair and reasonable. Pigou believes that economic welfare is greatly influenced by the amount of national income and the way of national income distribution. Through “from each according to his ability” and “distribution according to work”, “it is not only possible to ensure that all members of society are rich, but also to realize people's all-round free development”. Therefore, according to the relevant exposition of Marxist classics, fair distribution is not only the premise of realizing consumption, but also provides material conditions for human survival; But also to realize the free and all-round development of mankind.

2.2 The Present Situation of Urban Aging in China and the Development of Urban Old-Age Care

As early as the 1980s, China's community-based aged care service was launched. Shanghai was the first to enter the aging society, and it was also the first in China to develop community-based aged care service. The Shanghai Municipal Government invested a lot of financial resources to provide professional aged care, health care and recreational aged Services for all communities, forming a community-based aged care service system combining family and community. In order to protect the basic life of citizens, China has set up five kinds of insurance, among which the insurance related to the elderly is mainly medical insurance and social endowment insurance, which have different functions. However, due to many problems in our society, there are still many problems to be solved urgently, such as fewer types of medical insurance and imperfect medical insurance system, which are not conducive to the sound development of the social security system for the elderly. There are also strict requirements for team members. Only after strict examination of medical knowledge and ability can they engage in this work, support the efficient operation of the team and protect the health of residents. No matter in urban or rural areas, regardless of occupation, as long as citizens, they can enjoy social welfare fairly according to law and promote social equity. At present, China's social old-age security system is divided into organs and institutions, urban workers, and urban and rural residents. The security groups, security models, treatment standards, and sources of social security funds of each security system are different, which makes China's social security system present a “fragmented” development feature, cutting the integrity of the social security system. As shown in Table 1.

Table 1 Types of Social Pension Security

Type	Applicable population	Treatment standard	Source of social security fund
Organ unit	party and government	Length of service+salary+position	Financial subsidies
Government-affiliated institutions	Public institutions	Length of service+salary+position	Financial subsidies
Urban unit	Employees of urban enterprises	Payment period+payment limit	Enterprise and individual payment
Rural residents	Rural residents	Basic social pension+individual account	Individual payment+collective subsidy+financial subsidy
Urban residents	Self-employed, flexible employees, migrant workers	Individual account+social pooling fund	Individual payment+financial subsidy

The social old-age security system for employees of urban enterprises was established in 1951, marked as “People's Republic of China (PRC) Labor Insurance Regulations”; The social endowment insurance system for rural residents is a “new rural endowment insurance” based on the “old rural endowment insurance”, which was established in 2009 with the symbol “Guiding Opinions on Launching the Pilot Project of New Rural Social Endowment Insurance”. Due to the different types of security, there is an obvious gap between the pension benefits of various parts,

and the gap is gradually expanding, which has caused many social problems.

3. Countermeasures to Improve the Old-Age Care in Urban Communities in China

3.1 An Analysis of the Present Situation of Urban Community Pension in China

The speed index reflecting population aging is the time required for the progress of population aging or the improvement of aging in a certain period. Usually, the measurement index is 5 or 10 years as the measurement point to measure the average percentage increase of the elderly population every year. In a young population with rapid growth, the old-age dependency ratio is generally low, while in an old-age population with slow growth or even static growth, the old-age dependency ratio is high. In China, with the death rate decreasing and the average life expectancy extending, especially since the 1970s, the birth rate has been dropping sharply, and the proportion of the elderly has been increasing, so the dependency ratio of the elderly has also been increasing gradually. The changing trend of the old-age dependency ratio in China has been rising rapidly, as shown in Figure 1.

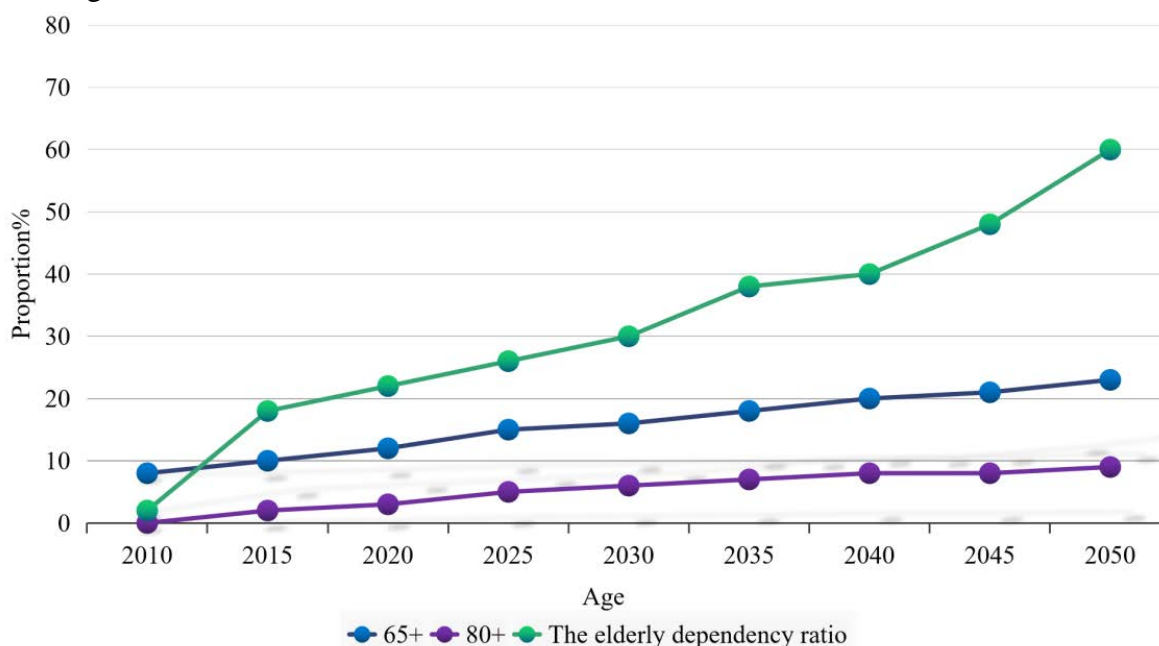


Fig.1 The Changing Trend of the Old-Age Dependency Ratio in China from 2010 to 2050

The dependency ratio of the elderly in 2010 was 18.6%. In 2050, the dependency ratio of the elderly will reach a high peak, with a growth rate of nearly every 10 years. At the same time, it also shows that in 2050, every 100 working people will bear the pension problem of 58 elderly.

On the one hand, the elderly service facilities are part of the security system for the elderly, but also an important part of public welfare facilities. According to the residential construction regulations, the developers of the new community must build the elderly service facilities matching the living scale according to the number of the elderly population in the community, which just reflects the legal care of the country for the rights and interests of the elderly. In addition to improving the medical facilities in the community, we should also improve the entertainment and sports facilities in the community to meet the spiritual needs of the elderly. Although many elderly people have reached the retirement age, they are still full of spirit, and their bodies are just a few small problems. Even some healthy elderly people are better than the young people who work every day. They do not need to take medicine and injections, and they do not need to work, Therefore, more than young people need rich recreational activities to meet their spiritual needs. Secondly, private organizations and volunteers with non-governmental backgrounds are encouraged to participate in community elderly care services. One is to set up a special community construction and development fund to accept charitable donations from charitable institutions and individuals in

society. The other is to encourage private enterprises, non-governmental organizations and individual volunteers to participate in community elderly care services, reduce the pressure of the government, and give them low-interest loans, Preferential measures such as partial tax reduction and exemption to attract caring enterprises from the society to participate in community pension, which is conducive to reducing the burden of the government and families, making full use of the idle resources of the society, optimizing the allocation of resources, and injecting fresh blood into the community pension service system.

3.2 Principles for Establishing a Fair Mechanism of the Social Pension Security System for Urban and Rural Residents

At present, the reform of the social endowment insurance system in China's institutions and institutions has been launched, which shows that it is impossible to realize the integration of the old-age security system in institutions and institutions, the old-age security system for urban employees and the old-age security system for urban and rural residents. The root cause of the difference between the "new rural insurance" and the "urban insurance" lies in the registered residence system. The registered residence system not only divides the citizenship into farmers and urban population, but also endows the political rights, social welfare, and resource allocation rights attached to the registered residence itself with the difference between farmers and urban population. Therefore, the reform of the registered residence system is the institutional guarantee to reduce the gap between urban and rural residents' social pension benefits. For China's megacities and provincial capitals, we should take a cautious attitude to avoid a large number of people pouring into cities, which will cause great pressure on urban environmental capacity.

In small and medium-sized cities, we should also adopt the principle of "gradual liberalization", take the city as the center, take circular steps, first reform the household registration of farmers in villages around the city, and then gradually outward on this basis. Unify urban and rural household registration step by step, in a planned and step-by-step manner. Medical and health care services rely on health service stations to provide convenient and nearby basic medical and health aged Services, improve the function of on-site medical services, and form a triple-functional medical network for the elderly in the community for the prevention, medical treatment and rehabilitation of senile diseases, so as to realize healthy aging. Help the elderly who have lost confidence and security in life to build up their courage in life, and protect those who are easily deceived because they attach importance to their health. In addition to the needs of material and life care, the elderly also need spiritual comfort such as communication, heart-to-heart, reading and reading newspapers. The community should send some professional chat attendants who know psychological knowledge to provide some positive, guiding, consulting services and temporary emotional aged Services, especially the "empty nesters" and "left-behind elderly". The government mainly provides basic service guarantee for the elderly who can't afford it, and invests in building some demonstration apartments for the elderly. Encourage enterprises, institutions, social organizations, individuals and other sectors of society in the community to provide financial assistance to community pension services, especially the individual economy and private economy to enter community pension services, promote the development of community pension service industries, explore ways to establish social welfare institutions such as private office assistance and public and private operation, and encourage private enterprises to establish old-age care centers and family nursing homes.

In addition, strengthen publicity, through appeals to the community, raising donations, donations or providing free services, such as charitable organizations, the Red Cross, volunteer associations and other charitable organizations can raise funds from the community to support the elderly. The smart community pension model is jointly implemented by medical institutions, insurance companies and community residents. The medical institutions sign service agreements with community residents and insurance companies to form a balanced and stable contractual relationship among the three. After signing the contract, community residents can enjoy a series of medical services provided by the hospital, such as the whole community consultation, health

examination, disease diagnosis and treatment, rehabilitation and return visit, to ensure the health of residents. This model not only simplifies the process of medical diagnosis, but also greatly reduces the medical expenses of residents.

4. Conclusions

China's community pension system is facing many problems and needs to be improved. Therefore, with the development of big data era and the acceleration of population aging process. From the perspective of the relationship between supply and demand of community pension, it has many advantages, such as low cost, wide coverage, flexible service methods, and more importantly, it can help some elderly people with financial difficulties and pension needs to be cared for, thus playing a good supporting role in stabilizing the family and society. Urban community elderly care can use existing resources to provide services, which is a necessary supplement to the establishment of a complete social old-age security system. It can not only meet the requirements of the elderly not to leave their children and families, but also meet the needs of the elderly to take care of, and also meet the needs of the elderly's spiritual and cultural life, and can also reduce the burden of children's care, and can promote the good development of society. In short, due to the limitations of personal ability and data collection, the research on the construction of social old-age security system for urban and rural residents in this paper is only tentative and basic, so omissions, flaws and even mistakes are inevitable. The evaluation results can quantify the service standard and quality, not only evaluate the effect of community pension in a region, but also provide the basis and guarantee for improving the service level.

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