# Research on the Supply-Demand Contradiction and Countermeasures of Care Services for the Elderly Population in China under the Digital Economy

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### **Abstract**

China has officially entered an aging society, and the decrease in family planning policies and people's willingness to have children has led to an imbalanced population structure and a shortage of labor supply. This has led to a much greater demand for care services among the elderly population in China than the supply of care service resources. This article studies the supply-demand contradiction of elderly care services from the perspectives of supply and demand, including home-based care services, community care services, and institutional care services. Corresponding improvement measures are proposed to address the supply-demand contradiction, improve the care service system, meet the diversified needs of the elderly, and promote harmonious social and economic development.

### **Keywords**

An Aging Society; Care Services; Imbalance between Supply and Demand.

#### 1. Introduction

The issue of elderly care is a key issue that urgently needs to be addressed in China. The Opinion on Strengthening the Work of Aging in the New Era emphasizes that the development of the elderly care industry should be included in the overall layout of promoting the "Five in One" and the "Four Comprehensives" strategic layout, and the policy system and institutional framework of elderly care services should be improved. Accelerate the improvement of the elderly care service system, so that all elderly people can have a happy old age. The satisfaction of elderly care needs can alleviate the current elderly care difficulties in China, research and analyze suitable care service models for China's national conditions, and promote the stable development of the care service industry chain. At present, there is a significant supply-demand mismatch in elderly care services in China, where the demand for care services continues to grow and there is a serious shortage of professional nursing staff. In order to meet the growing needs of the elderly population, the care service industry will increase a large number of employment opportunities and promote China's economic development.

The trend of aging before getting rich and having fewer children has made the elderly population more vulnerable, with an increasing number of "empty nest elderly". In China, most families rely on adult children to provide care for the elderly in their later years. However, with the trend of fewer and more core families, adult children not only have to bear the support of the older generation but also have to support their growth, which increases the burden of their children's elderly care. At the same time, there is also a large proportion of elderly people who are in a moderate or even highly disabled state, which greatly increases the difficulty of family

care. The enormous mental pressure and economic expenses can lead to significant emotional fluctuations, which can cause family conflicts and hinder the harmonious and prosperous family relationships. Therefore, a sound multi-level and multi angle care service system can complement the advantages of different care services, ease family relationships, and avoid unnecessary family conflicts.

#### 2. Literature Review

Domestic and foreign scholars mainly study the demand for elderly care services from micro and macro perspectives, with a focus on analyzing the current situation and scale of long-term care service demand in a certain region, and then studying the willingness and influencing factors of elderly care service demand. With the acceleration of aging and the extension of per capita life expectancy, the demand for long-term care services for the elderly continues to rise. Domestic and foreign scholars have described and measured the care service needs of the elderly population in China from both local and overall perspectives.

The long-term care model can be divided into three types: home community institutions (Cao Yanchun and Wang Jianyun, 2013). Existing research focuses on the interaction between government and social organizations, often neglecting the role of institutional environment in social organizations and lacking exploration of the legitimacy mechanism of social organizations participating in home care services.

Various types of care services, such as home care, community care, and elderly care institutions, should be integrated to provide continuous and systematic care services for the elderly (Evashwick, 1988). Care service providers should provide different services to the elderly based on their age, level of disability, and physical and mental health needs (Talley&Crews, 2017). Through research and analysis of the care needs and supply of elderly people in rural areas, it can be found that there are problems in rural community care services, and the institutional care service system is not sound (Yuan Xiaobo, 2007). The rural economic and social environment is relatively unique. We should actively seek development paths for community care services that are in line with the current situation of rural development, increase investment to promote the development of institutional care services, and encourage and support family care services.

China has a large population base, and the elderly have a high demand for emotional communication and daily care services. Some disabled elderly people lack pension funds, and there is a shortage of long-term care personnel in the market. The high fees of elderly care institutions have led to the development of the elderly care service industry being relatively backward, and the welfare system for the living care of disabled elderly people is not perfect (Ling Wenhao, 2011). In the context of family structure tending towards core and fewer children, based on the demand for elderly care services, it is suggested to continuously promote the participation of community and institutional elderly care providers in the construction of the care service system (Zhou Pingmei, Yuan Xin, 2019).

In summary, many scholars have indicated that home care services are the most convenient and reliable care services for the elderly in terms of care service supply. However, currently, the family structure is tending towards miniaturization and fewer children, and traditional home care services are facing a huge crisis. What is the current supply-demand gap in the three types of care services provided by home community institutions in China? How to effectively integrate the forces of families, society, and government on the basis of supply-demand contradictions, and improve a systematic, comprehensive, and diversified care service system? This is the contribution of this study.

### 3. Current Demand for Care Services for the Elderly Population in China

# 3.1. Analysis of the Demand for Home-based Care Services among the Elderly Population

The number of elderly people in China is constantly increasing, with approximately 190.64 million people aged 65 and above in 2020, accounting for 13.5% of the total population and a total dependency ratio of 45.9%. From 2010 to 2021, the proportion of different age groups in China has been constantly changing. From 2010 to 2019, the proportion of the 0-14 year old population in China remained relatively stable at around 16.6% of the total population, but the proportion showed an upward trend from 2019 to 2021. The proportion of labor force aged 15-64 has gradually declined over the past 12 years, while the proportion of elderly people aged 65 and above has continued to grow, increasing from 8.9% in 2010 to 14.2% in 2021, a total increase of 5.3%. The continuous growth of the elderly population and the continuous decline of the labor force have led to an increase in the elderly dependency ratio from 11.9% in 2010 to 19.7% in 2020. The service targets of home-based care services in our country are mainly semi disabled and disabled elderly people whose daily lives are hindered. This group is an important care target for government welfare and also has the highest demand for home-based care services. As the disability rate of the elderly continues to increase, more home-based care services will be needed, which will further widen the supply-demand gap.

The vigorous development of the social economy and the transformation of elderly care concepts have made the elderly's elderly care needs increasingly rich, no longer limited to household chores and taking care of the daily lives of younger generations. After the basic living needs of the elderly are met, they begin to pursue a colorful elderly life and enjoy spiritual pleasure. Community care services in our country are currently in the stage of "de domestication", during which they play a transitional role from home-based care to institutional care. Physical weakness leads to a decrease in the mobility and range of activities of the elderly, thus requiring an elderly friendly community and its surrounding environment, as well as high-quality service facilities. The elderly have a strong demand for parks or squares, elderly activity rooms, and sports and fitness venues.

### 3.2. Current Supply Status of Care Services for the Elderly Population in China

According to the 2014 Class China Elderly Social Tracking Survey, there were 2.973 people living with the surveyed elderly, with an average of 1.283 sons and 1.204 daughters. Most elderly people in urban areas take care of their spouses and children, while those in rural areas take care of their spouses, daughter-in-law, and children. The probability of primary caregivers in urban areas being nannies or hourly workers is higher than in rural areas. At present, the vast majority of elderly people still choose home care services, and the caregivers and responsible persons for home care services are mainly family members.

At the end of 2020, there were a total of 147000 community mutual aid elderly care facilities, 3.328 million community elderly care service beds, and accessibility upgrades benefiting approximately 757000 elderly and disabled families. Provide an accessible travel environment for the elderly, and improve preferential policies for elderly transportation such as highways, waterways, and urban passenger transportation. Continuously promote the construction and renovation of accessible transportation facilities and equipment, and actively promote the application of accessible urban buses, taxis, etc. Continuously enhance the level of elderly friendly travel services, promote the retention of manual service windows at passenger stations such as highways, waterways, and rail transit, and open services such as 95128 telephone ride hailing and one click ride hailing services, providing convenient transportation services for the elderly.

There are over 80000 senior universities across the country, with over 14 million students enrolled. There are a total of 29 provincial-level open universities for the elderly, with 3.5 million people receiving offline training and 80 million people receiving online training. There are 221 member units of the Third Age University Alliance in universities. Elderly education and learning points have been established in 216 cities (prefectures), 689 counties (cities, districts), 4856 townships (streets), and 26698 villages (communities). Provincial elderly education or lifelong learning platforms have registered 6.3 million students and received over 80 million visits. From 2015 to 2020, China's elderly care institutions showed an overall growth trend. At the end of 2020, there were 38000 registered elderly care institutions nationwide, an increase of 11.8% from 2019 and 35.7% from the end of 2015.

# 4. The Current Supply-Demand Contradiction of Care Services for the Elderly Population in China

# **4.1.** Analysis of Supply-demand Contradictions in Home-based Care Services for the Elderly Population

### 4.1.1. High Pressure from Care Service Providers, Lack of Social Support, and Inability to Meet the Needs of Elderly People

Due to the concept of "raising children to prevent aging" in our country and the sense of belonging of the elderly to the family, the vast majority of elderly people prefer to experience home care services at home. There are some elderly people who are not completely disabled and still have a relatively large number of children. The main suppliers of home care services are family members, who rely more on their children in daily life. As the main caregivers or responsible persons, children will bear a heavy burden of support. On the one hand, if the elderly are personally taken care of by their children, it will consume a lot of their energy and physical strength. In this situation, children need to cope with work pressure while away, and after returning home, they not only need to provide basic daily care for the elderly, but also meet their other needs. Under such heavy pressure, children often find it difficult to meet the diverse and deep-seated needs of the elderly. On the other hand, when family members are unable to afford care services and economic conditions permit, they can choose to hire others to provide care services for the elderly. At present, the cost of providing home care services for nannies and caregivers is relatively high, and most elderly people do not have enough income to pay. These expenses need to be subsidized by their children, making it difficult for the children of elderly people to bear the service costs of two generations.

### 4.1.2. The Supply of Care Services is Single and Lacks Professionalism, Which Cannot Meet the Diverse Needs of the Elderly

The main content of home care services is still daily life services. Caring for disabled elderly people not only includes feeding and drinking water, cleaning the body, helping with excretion, etc., because this is only the most basic service for disabled elderly people. Disabled elderly people also need to live with dignity and have diverse needs. In addition, disabled elderly people also have entertainment and elderly education needs. If the mental needs of disabled elderly people cannot be well met, they will develop a series of psychological diseases such as depression and inferiority, and even consider themselves a burden.

At present, the supply of home care services lacks professionalism, and most family members and hired caregivers do not have professional knowledge. In addition, the general caregiver education level is not high, which cannot help the elderly to train and recover physical functions, nor can professional knowledge be used to solve the psychological problems of disabled elderly people. This leads to the inability to effectively meet the needs of disabled elderly people.

# 4.2. Analysis of Supply-demand Contradictions in Community Care Services for the Elderly Population

### **4.2.1.** Imbalance between the Demand for Elderly Activities and the Supply of Community Activity Venues

With the development of an aging society, the demand for quality of life among the elderly population is gradually increasing, and communities are necessary places for elderly people to engage in leisure activities. Elderly people enjoy activities such as walking, exercising, playing cards, and chess. The types of equipment in the community and surrounding areas are relatively complete. However, the number of service equipment in community places is currently limited by the size of the community itself, so some elderly people express that they cannot meet their needs.

### **4.2.2.** The Phenomenon of High Demand and Low Utilization in Community Care Services

Due to factors such as regional customs, economic income, and education level, there are significant differences in the demand levels for community care services among different groups of elderly people. The quantity, quality, and structure of community elderly care services tend to be homogeneous, and the quality of elderly care services varies, resulting in a mismatch between the supply of elderly care services and actual demand.

# 4.3. Analysis of Supply-demand Contradictions in Institutional Care Services for the Elderly Population

The demand for elderly care services is growing rapidly, but the effective demand for elderly care institutions is seriously insufficient, resulting in low occupancy rates and a mismatch between the supply and demand of elderly care services. As of 2020, China has 5.291 million beds in elderly care institutions, but only 2.146 million people have been accommodated, and the vacancy rate of beds in elderly care institutions is as high as 50%.

# 5. Analysis of Influencing Factors on the supply-Demand Contradiction of Care Services for the Elderly Population in China

# 5.1. Analysis of Influencing Factors on the Supply-demand Contradiction of Home-based Care Services for the Elderly Population

### 5.1.1. Population Aging, Core Family Structure, and Fewer Children

The average life expectancy of the population in our country is on the rise. During the reform and opening up period, it was 68 years old, 68.55 years old in 1990, 71.40 years old in 2000, 74.83 years old in 2010, and 77.30 years old in 2020. In 2020, the average life expectancy of women was higher than that of men, at 80.43 years and 74.56 years, respectively. The extension of per capita life expectancy has accelerated the expansion of the elderly population, and the number of elderly people continues to increase, making care services more urgent for them.

The family planning policy began to be implemented in the 1980s, and most of the children born at that time were only children. Currently, these children have gradually entered their thirties and forties, and their parents have gradually become elderly people. The family structure in China has become smaller and more core oriented. In 2018, the average household population was 3 people, but in 2022, the average household population in China dropped below that of a "family of three" and transitioned to a "two person family".

# 5.2. Analysis of Influencing Factors on the Supply-demand Contradiction of Community Care Services for the Elderly Population

### 5.2.1. Care Services are Limited by the Size of the Community Itself

The area of community care service institutions is usually relatively small, so they can only provide 15-20 beds, which is effective in accommodating the number of elderly people. Usually, there is a lot of community work and insufficient attention is paid to the elderly. The community needs to coordinate the relationship between the government, neighborhood committees, and street offices, as well as implement the government's arrangements for non elderly care work. These tasks prevent the community from focusing on meeting the needs of elderly care services. In addition, the limited funds available for facility construction in the community have resulted in a limited number and tight usage of professional nursing equipment within the community. Due to the constraints of community size, community care services cannot meet the complex care needs of some elderly people.

### 5.2.2. Imbalance in the Number and Structure of Community Care Service Personnel

There is a lack of professional caregivers in the community, which cannot meet the service needs of all elderly people. In general, the care services provided by community caregivers to the elderly are relatively basic and cannot meet the specialized and specialized care needs of disabled elderly people. The reserve and supply of professional care service personnel are seriously insufficient, and there is a significant gap in the training and education of long-term care service personnel in China, which further exacerbates the shortage of human resources in the care service industry and exacerbates the supply-demand contradiction.

# 5.3. Analysis of Influencing Factors on the Supply-demand Contradiction of Institutional Care Services for the Elderly Population

Due to the influence of family elderly care, the occupancy rate of elderly care institutions is relatively low, and the vast majority of elderly people still choose home care services. In addition, the service quality of elderly care institutions in our country is uneven, and some elderly care institutions do not have sufficient professional nursing service personnel. Their addresses and service prices are unreasonable, and the elderly care service facilities are not perfect. According to the charging prices of elderly care institutions, they can be divided into high-end elderly care institutions, mid to high end, and mid to low end elderly care institutions. There are a huge number of middle and low-end elderly care institutions, but they do not have complete elderly care service facilities. Their monthly fees are below 3000 yuan, and the occupancy rate is over 50%; Middle and high-end elderly care institutions charge a monthly fee of 4000 to 8000 yuan, with an occupancy rate of approximately 90% or more; High end elderly care institutions charge over 8000 yuan per month, with a lower occupancy rate of about 30%. Due to income constraints, elderly people in economically underdeveloped and rural areas are unable to enjoy high-quality and diversified institutional elderly care services.

# 6. Countermeasures and Suggestions for Solving the Supply-Demand Contradiction of Care Services for the Elderly Population in China

To solve the supply-demand contradiction of elderly care services in China and achieve supply-demand matching, the government needs to play its role in guiding, regulating, and supervising. In addition, a new type of elderly care cooperation model should be established among the government, market, society, and families to provide more comprehensive and efficient care services for disabled elderly people.

### 6.1. Improve the Policy Guarantee for Care Services

The protection of laws and regulations is the basic guarantee for the sustainable development of the care service system. No matter what rules and regulations are implemented, only at the legal level can we have the most fundamental protection. At present, the policies, regulations, and regulatory system regarding the care service system in China are not sound and need to be improved. The Chinese government should improve the supply of different care services. For community service organizations, it is necessary to further improve services such as home care, daily care, and psychological counseling. For elderly care institutions, it is necessary to further strengthen daily care and rehabilitation treatment services, and optimize the content of medical services and psychological comfort services.

Secondly, it is necessary to establish a sound and comprehensive supervision and evaluation management system, strengthen the supervision and management of the service qualifications of nursing service providers, promptly clean up suppliers who do not meet the requirements, strengthen the testing of nursing service facilities, and timely repair or update some old facilities. Strengthen the inspection of health and care services in community service centers and institutional service centers, and regularly assess service personnel. Improve the scientific regulatory mechanism and strengthen the long-term supervision and management mechanism of care services.

### 6.2. Strengthen the Connection of Home Community Institutional Care Services

At present, the three service forms of home-based community institutions in China are separated from each other, and there are obstacles in information communication between them. Therefore, they cannot provide corresponding service content and personnel based on the number and content of elderly service needs, leading to the coexistence of a shortage of care service resources and idle resources. Therefore, it is necessary to establish a sharing platform for basic information archives of the elderly, improve the utilization and allocation efficiency of care service resources, and fully utilize resources.

### 6.3. Plan for the Cultivation and Development of Nursing Service Talents

At present, the enrollment scale of relevant colleges and universities for care services is limited, and the personnel trained are far from meeting the increasing demand of the care service industry. To meet the demand for specialized talents in the elderly care service market, accelerate the establishment of education and training mechanisms. This not only requires regular skill training for current caregivers, but also enhances their professional quality. In addition, it is necessary to establish a professional program for elderly care services, expand the training scale of service personnel, accelerate the construction of a high-quality professional team, improve the standardization and standardization level of services, and fundamentally improve the level of elderly care services.

#### 6.4. Develop a High-quality and Diversified Care Service System

Continuously improving and optimizing long-term care service projects is beneficial for the construction of the care service system, providing high-quality and diversified services for the elderly. Improve the infrastructure and medical supporting facilities of elderly care institutions, and appropriately combine smart elderly care platforms or products to improve the service quality of elderly care institutions.

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