Social Work for the Elderly under Big Data: Discussion on Family-Care in Communities Service For the Aged

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Abstract: With the deepening of global population aging, population aging has become the focus of attention of governments all over the world. China's aging population will present some new characteristics worthy of attention. The construction of "Internet +" urban FCC service system under the concept of big data will help to solve the problems of the contradiction between supply and demand of old-age care services and the low degree of integration of old-age care services resources caused by poor information in traditional urban FCC services. In order to rationally allocate resources for aged care services and improve the quality of life of the elderly, Driven by big data, this paper analyzes the present situation and existing problems of social work for the elderly in China, and proposes to build a community home-based aged care service system based on big data. The construction of FCC service system based on big data is not only to simply add medical services to old-age care services, but also to fundamentally break the service boundaries between departments and institutions, provide personalized and intelligent services, and achieve the ultimate goal of combining medical care with nursing care. Creating a better living environment for the elderly, reducing the burden of social welfare and home care for the elderly can help the elderly to prolong their life expectancy.

1. Introduction

With the aging of the global population structure, the speed of global economic and social development has been directly affected, and the aging problem has become the focus of attention of governments [1]. At present, China is at the peak of population aging, and the trend of rapid population aging will continue until the middle of 21st century [2]. At the same time, the aging development trend in China presents a complicated situation [3]. The elderly population has a large base, a fast growth rate and a large quantity of very old people, and the characteristics of getting old before getting rich and getting old before being prepared are obvious. The aging of the population has brought a serious negative impact on social development [4]. On the one hand, the aging population will reduce the proportion of labor force in the total population and slow down the economic growth rate. On the other hand, the aging population will increase the pressure of social pension and aggravate the social burden [5]. During this period, with the continuous growth of aging and the acceleration of aging process, the total population of China is obviously aging, and the direct result of aging is that the pressure of social assistance is increasing. Among them, more than 85% of the elderly have the willingness to enjoy home-based care services, and only about 7% choose institutions for the elderly [6]. The burden of caring for the elderly and young people is intertwined, and active countermeasures are needed. China, as one of the countries with a large population, puts the issue of providing for the aged in the top priority. Therefore, it is of practical significance to discuss the FCC service under big data.

Under the background of the increasing scale of the elderly population, the aging of the population is deepening, the age structure of the elderly population is aging rapidly, and the burden of social pension is increasing [7]. Restricted by the uneven distribution of medical and health resources, the gap between urban and rural areas is large, and the health level at the grassroots level is weak; Social old-age care institutions are expensive and the types of services are single; The quantity of community pension institutions is small, which is in short supply; The elderly themselves are inconvenient to move and have weak ability to pay; Due to the long course of

chronic diseases and high cost, the problem of providing for the aged has become a difficult problem in the whole society [8]. In this case, FCC for the elderly with both service advantages and residential advantages has become an ideal way for the elderly. However, in the current FCC practice, there are still some practical problems that are difficult to overcome by the traditional care model [9]. In recent years, exploring and optimizing the FCC model to deal with the problem of old-age care has become a hot topic in all walks of life. China is a country with the fastest aging development in the world. In response to the impact of the aging population, big data has a more "sense of mission", which can not only provide more adequate and diversified service supply to meet the diversified needs of the aged, but also meet the requirements of high-quality growth of the aged care service, and ultimately promote the healthy growth of the aged care in China. Driven by big data, this paper analyzes the current situation and existing problems of social work for the elderly in China, and proposes to build a FCC service system based on big data.

2. Community home care service demand

After years of growth of the old-age care, many modes such as "family care", "institution care", "house care" and "off-site care" have coexisted, but they still cannot meet the needs of the broad masses of the people. Looking at the literature on FCC, community care services mainly include daily life care, medical care and spiritual comfort services. At present, the aging population in China embodies the characteristics of "getting old before getting rich". At the same time, due to the uneven distribution of medical and health resources, the gap between urban and rural areas is very large, and the basic health level is not high [10]. In the reality that the contradiction between supply and demand is becoming increasingly tense, it is urgent to carry out FCC services based on home and community. The provision of FCC services is a vital and energetic way to alleviate the pressure of old-age care. Figure 1 shows the demand for FCC services.
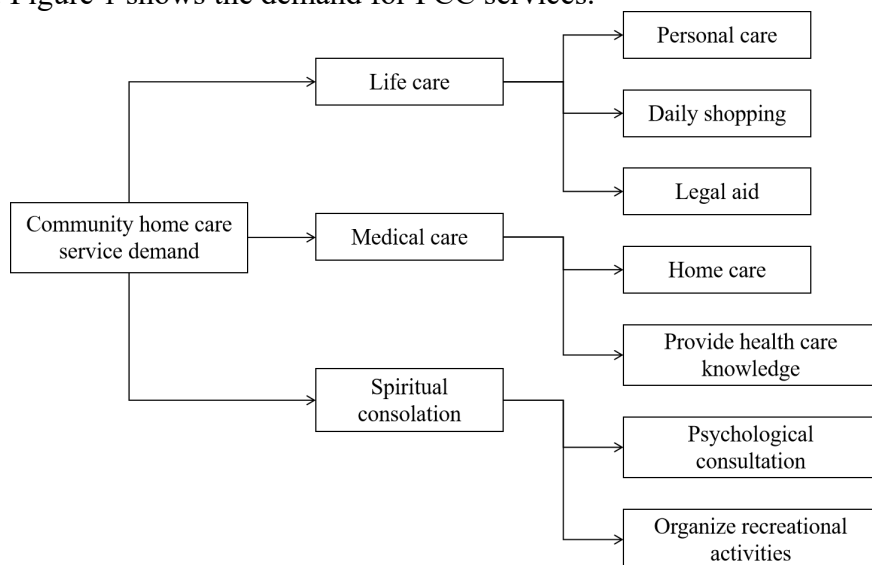

Figure 1 FCC service demand

The FCC service system based on big data is a new system integrating technology system and service system. It is a new service system supported by various technologies, based on data, relying on network, beyond space and time. As a brand-new medical model, the FCC service platform takes the elderly as the center, the family as the unit, chronic diseases as the starting point, and information technology as the carrier, which conforms to the present situation of the old-age care in China and the needs of the elderly in China.

3. The role of FCC service system construction

Community-based home-based pension model is more suitable for the social growth of China. This model not only avoids the disadvantages of lack of professional intervention, excessive

pressure on children's care and lack of family companionship for middle-aged and elderly people in institutional pension, but also integrates the advantages of family companionship in home-based pension and professional service in institutional pension. In the era of big data, "Internet +" FCC service is a new innovative development model, which can provide new reference and ideas for the exploration and research of care service. The FCC service system based on big data completes the standardization of pension data by collecting all kinds of information of the elderly in a comprehensive and real-time manner; By fully integrating pension-related businesses and combining big data with standardized pension services, the multi-level and diversified pension needs of the elderly can be met.

FCC for the aged is an inevitable development trend under the condition that the traditional family care for the aged function in China is gradually weakening, and it has its own unique advantages. It has played a great role in alleviating the pressure of old-age care brought by the aging population and meeting the diversified needs of old-age care services. Putting the FCC model in the era of big data means that the supply of old-age care services increasingly needs the collaborative participation of government departments, medical institutions, communities, enterprise organizations and social organizations. By using big data and establishing an analysis model for the aged, we actively explore new methods in data value mining and information utilization, and gradually develop from passive service to active service, so as to obtain the needs of the elderly in time, and then provide timely and accurate personalized services and interactive services for the elderly.

4. The construction of FCC service system

4.1. Construction of basic database system of sheep boss data platform

The big data platform for the aged, including data collection and data integration of pension-related businesses, realizes the functions of data application and data exchange. Basic database is the basic condition of "Internet + community pension". Its function or application field mainly focuses on the setting of pension service items by the competent authorities and the information recording of the recipients of pension subsidies, which is also the basis for pension service providers to receive service information. Data receiving, information transmission, data processing, decision evaluation and arbitration systems are the infrastructure of the cloud service platform for the aged at home. It overcomes the obstacles in different time and place and provides a smart service platform for the aged. Due to the differences in age, health status and life experience, the demand for aged care services will form a differentiated pattern. Applying big data to community home-based aged care services will make aged care services more targeted. According to data standards, professional databases such as basic information archives of the elderly, health archives, life care archives, service institutions, and professional and technical personnel libraries are established to provide unified data services for the elderly through data sharing and data mining functions. The work of issuing service vouchers by community workers is recorded in this platform, and the service card is recorded as the old service process, leaving traces on the information platform throughout the service, which is convenient for supervision and management. Through the statistics of the basic data of multi-subjects in the supply of old-age services, it is helpful for government departments to master the health data, population data, regional distribution data, consumption data and demand data of the elderly. Generally speaking, the cloud service platform of FCC for the aged not only meets the needs of the elderly, but also fully reflects the filial piety of children to the elderly in traditional Confucian culture.

4.2. Intelligent analysis and supervision platform

According to the results of intelligent analysis of pension data, the government can make more accurate pension policies, enrich social pension professional services, and choose home-based pension services more conveniently, thus improving the overall level of pension services. First of all, it is necessary to establish a service project evaluation standard and a service benefit evaluation

system to form a professional force for service project benefit evaluation. Secondly, it is necessary to continuously tap the potential needs of service objects. Big data runs through the whole process of the smart pension model, in which analyzing, processing and sharing data with information technology is the key. Using big data to analyze the needs of elderly care services at home can take into account the needs of elderly groups at all levels and in all aspects, and can also take into account fairness. Intelligent analysis platform, which provides rich graphic display tools, displays the results of statistical analysis in the form of visual charts and reports, so that the government and community managers and decision makers can understand the current overall situation, individual situation and development trend of old-age care, and provide support for the decision-making of the development of old-age care. The real-time and remote nature of big data makes it more timely to obtain the demand information of aged care services, makes the range of service providers wider and ensures the service quality. The establishment of community home-based care service system based on big data, the deep integration of artificial intelligence, Internet of Things and other technologies and smart devices in the field of care services, and the optimal allocation of community, institutions, families, individuals and care resources.

4.3. Construction of comprehensive service information platform for the aged

The design of comprehensive service information system for the aged consists of three parts: community management subsystem, medical service subsystem and general livelihood service subsystem. Through the Internet of Things, Internet, communication technology and other means, the comprehensive service information platform for the aged can meet the service demand of the elderly and the service supply of various social subjects, promote the integration of service resources for the aged, establish a large-scale, intelligent and refined service system for the aged, and realize the information management, data sharing and quality supervision of service for the aged. According to the characteristics of FCC for the aged, it provides functions such as emergency call, automatic alarm, remote reminder, health management, domestic service and other specialized services, and realizes the integrated management of Internet of Things terminal equipment, personnel organization management and business process management related to the care for the aged. In this process, the third-party professional evaluation agency evaluates and gives feedback on the whole FCC service, and the evaluation results and reports are uploaded to the big data platform, which provides data reference for all participants and can also be used as the basis for the next service bidding of the participants. At the same time, the system can also help the elderly to cope with emergencies, monitor the home safety management of the elderly and provide family care services for the elderly in the community through the connection with the Internet of Things technology. The FCC service model is shown in Figure 2.
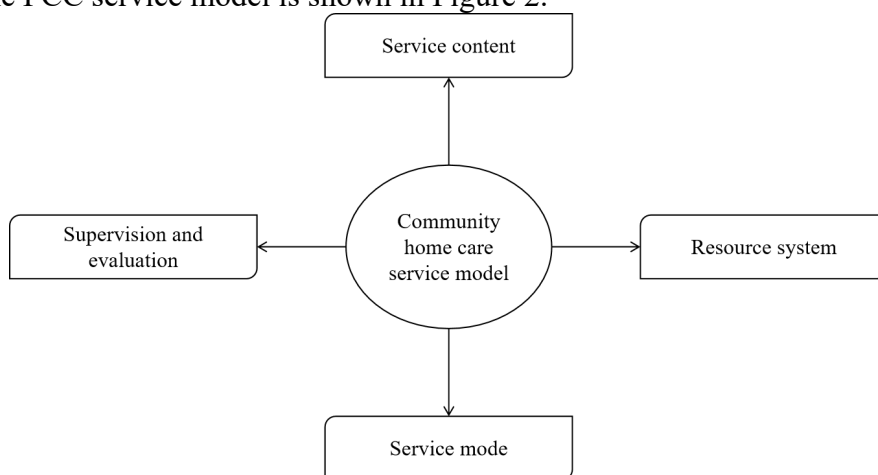

Figure 2 FCC service model

In addition, there are various factors that affect the demand for home care services for the elderly in the community. Demographic characteristics such as gender, nationality and living style, economic characteristics such as old-age insurance and total annual family income, and health

status affect the rural elderly's willingness to demand FCC services to varying degrees. By analyzing the data, we can predict the needs of the elderly. By integrating the multi-party data of the elderly, we can further obtain the real needs of the elderly, provide high-quality service in time, and easily obtain a high satisfaction evaluation. In addition, the government should actively improve the investment environment of FCC service industry and increase the support for FCC service from the policy level. At the same time, as a new mode of providing for the aged, the cloud service platform of FCC for the aged has high investment cost of equipment and manpower in the early stage, and it is not sustainable to rely only on government financial support. While the government continues to increase the input of social welfare expenses, it should broaden the financing channels, enrich the types of market services, and make full use of pension resources.

5. Conclusions

At present, the problem of providing for the aged has attracted much attention. Under the situation that the family's ability to provide for the aged is weakening day by day and the cost of providing for the aged in institutions remains high, home-based care for the aged in communities with both service advantages and residential advantages has become an ideal way for the elderly. This paper puts forward the content of constructing a new service system, formulating data standards and establishing a unified data source for the aged, and realizing the transformation from passive service to active service according to intelligent data analysis. At the same time, this paper analyzes the significance and feasibility of building a FCC service system for the elderly based on big data. The way to construct the FCC service system in Internet + needs to build the horizontal and vertical basic database system, the service information system and the functional operating system and software development system of the FCC service. It not only adds medical services to the old-age care service, but also fundamentally eliminates the service boundary between departments and institutions, and integrates the medical system with other health-related industries. This is the urgent need of the elderly, the inevitable direction of the growth of providing for the aged, and the concrete embodiment of a healthy China. Through the whole process tracking and service evaluation process, we will continuously improve the professional level of the aged care service, meet the multi-level and diversified needs of the aged care, realize the requirements of high-quality growth of the aged care service, and further promote the healthy growth of the aged care cause in China.

References

[1] Liu-Ambrose T, Davis J C, Best J R, et al. Effect of a Home-Based Exercise Program on Subsequent Falls Among Community-Dwelling High-Risk Older Adults After a Fall: A Randomized Clinical Trial[J]. JAMA The Journal of the American Medical Association, 2019, 321(21):2092.

[2] Zhang S C, Wang H, Liu Z, et al. A Comprehensive Evaluation of the Community Environment Adaptability for Elderly People Based on the Improved TOPSIS[J]. Information (Switzerland), 2019, 10(12):389.

[3] Shrestha M, Chaudhary R C. Socio-Demographic Profile, Morbidity Pattern and Reason for Elderly People Living in an Old Age Homes: A Community Based Study From Banke District[J]. Journal of Nepalgunj Medical College, 2019, 17(2):58-61.

[4] Tian X. Research on the realization path of smart old-age care in Suzhou based on intelligent recommendation system[J]. Journal of Intelligent and Fuzzy Systems, 2018, 35:1-13.

[5] Dautzenberg G, Lijmer J, Beekman A. Diagnostic accuracy of the Montreal Cognitive Assessment (MoCA) for cognitive screening in old age psychiatry: Determining cutoff scores in clinical practice. Avoiding spectrum bias caused by healthy controls[J]. International Journal of Geriatric Psychiatry, 2019, 35(3):261-269.

[6] Sun Haiyan, Tang Xiaofeng, Zhou Lihua, et al. The application of chronic disease health management model in community home care service [J]. Health Management, 2019, No.112(16):56-58.

[7] Li Wenqi. Research on the improvement of community home care service supply mechanism from the perspective of network governance [J]. Reform and Strategy, 2018, 34(7):6.

[8] Sun Jia. Investigation on the Survival Status of Community Home Care Service Centers and Countermeasures [J]. Ecological Environment and Protection, 2021, 4(2):99-100.

[9] Ren Zongwei, Liu Yubing. Study on the scheduling strategy of community home-based care workers considering the perceived satisfaction of the elderly [J]. Logistics and Management, 2022, 31(8):232-239.

[10] Ren Zongwei, Liu Chuanqing. SD-based community home care service supply chain service quality model [J]. Enterprise Economy, 2019, 38(9):7.