

Research on the Supply and Demand of Long-term Care for Disabled Elderly in Hohhot Under the Background of Combination of Medical Care and Nursing

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doi: 10.56397/SSSH.2022.08.01

Abstract

With the growing number of semi-disabled and disabled elderly people in China, the demand for long-term care services is growing faster. With the service conditions of “maintenance integration”, the elderly with disabilities are increasingly favored by the combination of medical and nursing institutions. From the perspective of supply and demand of long-term care services, this paper explores the current situation of long-term care service supply in medical and nursing institutions in Hohhot and the demand for long-term care services of disabled elderly residents. Findings indicate that there is a contradiction between the supply and demand of long-term care services in medical and nursing institutions due to the lack of government guidance in funding investment, unclear positioning of medical and nursing institutions, lack of professional nursing personnel and imperfect long-term care security system. It is suggested to resolve the contradiction between supply and demand of long-term care services from optimizing resource allocation, perfecting the needs assessment system of disabled elderly, cultivating nursing talents, and perfecting the long-term care security system.

Keywords: combination of medical care and nursing, disabled elderly, long-term care services, supply and demand contradiction

1. Introduction

With the deepening of the aging of the population in my country, the number of disabled and semi-disabled elderly is also increasing rapidly. Disabled elderly refers to those aged 60 and above who suffer from mental and physical dysfunction due to disease, injury, aging, and psychological disorders (Sifeng Zhang, Min Tang & Miao Zhou, 2016). The general term for the disabled and semi-disabled elderly people who have limited daily activities and need help from others. According to the seventh national census results, Hohhot has a population of 621,300 people aged 60 and above, accounting for 18.03% of the total population, of which 412,100 people are aged 65 and above, accounting for 11.96% of the total population (Hohhot Statistics Bureau, 2021). The growing population of disabled elderly has an urgent need for long-term care services. In 2013, China began to explore the construction of an elderly care service system integrating medical care and elderly care. In June 2016, Hohhot became the first batch of national pilot cities for the integration of medical care and elderly care. The combined medical and nursing care model focuses on two aspects of medical care and life care in the care of the elderly, and the main body of supply includes families, communities and elderly care institutions. Aged care institutions are welcomed by disabled seniors. In order to further solve the problem of long-term care services for the disabled elderly, China launched the pilot work of long-term care insurance in 2016. In September 2020, 14 new pilot cities including Hohhot were added. Based on the current situation of long-term care service supply in Hohhot integrated medical and nursing institutions and the current demand of disabled elderly, this paper

explores the contradiction between the supply and demand of long-term nursing services and analyzes its causes, so as to promote the long-term care insurance policy and improve the integration of medical and nursing services in Hohhot. Provide policy advice for the elderly care system.

2. Analysis of the Supply of Long-term Care Services for the Disabled Elderly in Hohhot

This paper adopts the simple random sampling method, selects 6 medical and nursing institutions in Hohhot, and summarizes the current situation of long-term care service supply from four aspects through a visit and survey.

2.1 Current Supply of Long-term Care Contents

Compared with a single elderly care institution or medical institution, the nursing service provided by the medical and elderly care institution is more comprehensive, including daily life care, basic medical care, rehabilitation treatment, health guidance, spiritual comfort and other rich long-term care services. In the selection of content and methods of long-term care services, graded care is also adopted, which are mainly divided into special care, primary care, secondary care and tertiary care, which are targeted to provide elderly people with different degrees of disability.

However, not all integrated medical and nursing institutions can provide the above-mentioned comprehensive nursing services. Especially public nursing institutions, which are limited to daily life care and basic medical nursing services. Few facilities and places are available to provide rehabilitation training for the disabled, and there is a lack of services such as spiritual comfort, social participation, and hospice care.

2.2 Current Supply of Long-term Care Providers

At present, the main providers of long-term care services in medical and elderly care institutions include professional nurses, full-time doctors, and nurses without professional nursing background. Some private institutions are equipped with nutrition and health care physicians. There are large gaps in the structure of nursing service providers among different medical and nursing institutions. Private institutions with better conditions are equipped with adequate and professional doctors and nursing staff, most of whom have obtained vocational skills qualification certification, and women aged 25-40 account for more than 70%. However, the nursing staff in public and other medical and nursing institutions with lower fees are mainly females aged 40-50 without professional nursing background, with a junior or senior high school education, and their treatment level is relatively low.

2.3 Current Supply of Long-term Care Costs

The payment range for the disabled elderly who are admitted to the medical and elderly care institutions is 1,500-6,000 yuan per month. Including meal fee, bed fee and nursing fee, among which nursing fee is charged according to different levels, with an average of 500 yuan per month for tertiary care, and an average of 1,000 yuan per month for secondary care. However, the nursing expenses of both private and public medical and nursing institutions need to be paid by themselves, and the nursing expenses of private institutions are generally higher than those of public institutions.

2.4 Current Supply of Long-term Care Beds

Up to now, Hohhot has 39 public and private nursing homes with 5,627 beds (Hohhot Civil Affairs Bureau, 2021). However, it was found that the current medical and nursing institutions have low occupancy rates, high vacancy rates, and a waste of resources. For example, a nursing home has 214 beds, but only 70 elderly people actually live in it. An apartment for the elderly has 300 beds, but only 132 people actually live in it.

3. Analysis of the Needs of Long-term Care Service for Disabled Elderly in Hohhot

3.1 The Current Situation of the Needs of the Disabled Elderly

This paper uses the long-term care needs scale for the disabled elderly compiled by Peiye Cao et al. (Peiye Cao, & Qinghua Zhao, et al., 2018). to evaluate the long-term care needs of the disabled elderly in Hohhot. Table 1 reports the scores of the long-term care needs of the disabled elderly in the 288 integrated medical and nursing institutions in this survey. The total score of long-term care service needs is 126 points (the full score is 190 points). In the six dimensions of long-term care needs, according to the level of the items, the order is basic medical care needs, health guidance needs, spiritual comfort needs, daily life care needs, social participation needs and specialized medical care needs.

Table 1. Long-term care needs score of disabled elderly(n=288, $\bar{x} \pm s$)

Project	Total score	Average score	Sort
Total demand for long-term care services	126.11±1.17	3.32±0.03	

Primary medical care needs	15.80±0.18	3.95±0.05	1
Health guidance needs	27.94±0.40	3.49±0.05	2
Spiritual comfort need	26.96±0.34	3.37±0.04	3
Daily care needs	38.82±0.81	3.53±0.07	4
Social participation needs	9.40±0.21	3.13±0.07	5
Specialized medical care needs	7.19±0.23	1.80±0.06	6

3.2 Univariate Analysis of Long-term Care Needs of the Disabled Elderly

Table 2 reports the basic information of the respondents and the results of univariate analysis. The results showed that the long-term care needs of the disabled elderly were significantly different in the comparison of 7 variables: age, personal monthly income, payment method, number of relatives' monthly visits, living style, disability time and disability degree ($P < 0.05$).

Table 2. Results of univariate analysis(n=288)

Variable		Number	Percentage(%)	t/F	P
Gender	male	104	36.1	0.997	0.320
	female	184	63.9		
Age	60-69 years old	22	7.6	10.172	<0.001
	70-79	157	54.5		
	80-89	84	29.2		
	> 89 years old	25	8.7		
	married	251	87.2		
Marital status	unmarried	12	4.2	2.266	0.081
	divorce	8	2.8		
	death of a spouse	17	5.9		
Have children	yes	272	94.4	-0.146	0.884
	no	16	5.6		
Level of education	illiteracy	15	5.2	0.719	0.541
	Primary school	120	41.7		
	Middle school	127	44.1		
	Junior college or above	26	9.0		
Personal income	monthly < 1000 yuan	34	11.8	5.285	0.006
	1000-3000 yuan	148	51.4		
	> 3000 yuan	106	36.8		
Economic sources	Pension/pension	206	71.5	2.906	0.056
	Children subsidies	62	21.5		
	Other subsidies	20	6.9		
Payment method	Pay their own	201	69.8	2.271	0.024
	Paid by children or others	87	30.2		
Monthly visits by relatives	2 times or less	191	66.3	5.424	<0.001
	> 2 times	97	33.7		
Way of living	Live with other old people	250	86.8	-17.519	<0.001
	Living alone	38	13.2		
Disability time	< 3 years	182	63.2	75.956	<0.001

	3 to 5 years	68	23.6		
	> 5 years	38	13.2		
	A mild disability	92	31.9		
The degree of disability	Moderate disability	128	44.4	284.059	<0.001
	Severe disability	68	23.6		

3.3 Analysis of Influencing Factors of Long-term Care Needs of Disabled Elderly

The results of the regression analysis (Table 3) showed that the number of visits per month by relatives, the way of living, the time of disability and the degree of disability were the main influencing factors for the long-term care needs of the disabled elderly in the combined medical and nursing institutions ($P < 0.05$). The more visits, the lower the demand for long-term care services of the disabled elderly; the disabled elderly living alone in medical and nursing institutions have a higher demand for long-term care services than the disabled elderly living with others; the disabled elderly The longer the disabled time, the higher the demand for long-term care services; the higher the degree of disability, the higher the demand for long-term care services.

Table 3. Linear regression results($n=288$)

Variable	Regression coefficient	Standard error	Standardized regression coefficients	t	P	VIF
(constant)	109.944	3.526		31.184	<0.001	
Monthly visits by relatives (take ≤ 2 times as a reference)						
>2 times	-5.407	1.44	-0.129	-3.756	<0.001	1.16
way of living(Based on living with other elderly people)						
live alone	11.474	2.609	0.196	4.398	<0.001	1.953
Disability time (with reference to <3 years)						
3 to 5 years	6.951	1.792	0.149	3.879	<0.001	1.451
> 5 years	8.395	2.425	0.144	3.462	0.001	1.687
Degree of disability (with mild disability as reference)						
Moderate disability	23.752	1.818	0.596	13.068	<0.001	2.043
Severe disability	29.165	2.707	0.626	10.775	<0.001	3.31

Note: Regression equation $F=58.829$, $p < 0.001$, $R=0.848$, $R^2=0.720$, adjusted $R^2=0.707$.

4. Analysis of the Contradiction Between Supply and Demand of Long-term Care Services for the Disabled Elderly in Hohhot

4.1 The Government Lacks Guidance on the Investment of Medical and Nursing Institutions

The low occupancy rate of medical and elderly care institutions results in a waste of elderly care resources and a mismatch between supply and demand. First, private institutions are less subsidized by the government and mainly rely on their own operating income. In order to improve market competitiveness, they usually build high-end elderly care institutions with beautiful environments, complete facilities and professional medical and nursing teams. The elderly can give up living due to financial pressure. Second, although the government and their costs subsidize public institutions are relatively low, most of the funds invested by the government are used for bed construction, while ignoring the investment in optimizing nursing service projects, attracting professional nursing talents, and improving medical equipment. The phenomenon of low fees and low service quality is far from the psychological expectations of the disabled elderly, resulting in the disabled elderly being reluctant to stay. In addition, the current government mainly distributes long-term care subsidies based on the number of

beds in medical and nursing institutions. This subsidy policy will encourage institutions to mainly accept the elderly with mild and moderate disabilities in order to reduce the cost of nursing care, and avoid choosing Severely disabled elderly.

4.2 Medical and Nursing Institutions don't Accurately Analyze the Needs of the Disabled Elderly

On the one hand, there are few long-term care service items in medical and nursing institutions, and they focus on daily life care and basic medical care. According to the results of the questionnaire survey, the scores of health guidance needs and spiritual comfort needs of the disabled elderly are higher than those of daily life care needs, and some institutions lack professional rehabilitation training facilities and equipment, and do not employ rehabilitation trainers. The need for consolation is not taken seriously enough, cultural and recreational activities are too single, and there is a lack of hospice care services. On the other hand, institutions that combine medical care and elderly care lack accurate analysis of the needs of the disabled elderly, and do not provide targeted long-term care services. Through regression analysis, it is found that compared with the disabled elderly who often have relatives to visit and live with others every month, the disabled elderly who lack relative care and live alone have a higher demand for long-term care services. The elderly need more spiritual comfort services to meet their psychological needs.

4.3 Insufficient Supply of Professional Nursing Staff

The main problems faced by the current integrated medical and elderly care institutions are the large shortage of nursing staff, the low professional level, and the older age of the entrants. The reasons for this phenomenon are as follows: First, there is a general prejudice against the nursing profession in society. It is considered "indecent" for young people to do such work. Lack of social identity in the nursing profession leads to a lack of willingness to be employed. Secondly, the work intensity of nursing staff is high, but the salary is low. Currently, the nursing staff in the medical and elderly care institutions work more than 9 hours daily. On average, Nursing staff in some public institutions have to take care of 10 disabled elderly people. Salary is less than 5,000. Finally, personal career development is limited. Nursing staff in institutions mainly take care of the elderly in daily living and rehabilitation training. There is almost no career development space and promotion channels.

4.4 The Long-term Care Security System Is not Sound

The contradiction between the lower income of the disabled and the high cost of care is also an important factor causing the mismatch between the supply and demand of long-term care services. According to the results of the questionnaire survey, 51.4% of the disabled elderly have a monthly income of 1,000-3,000 yuan, and 30.2% of the disabled elderly need to be paid by their children or others for the cost of staying in a combined medical and elderly care institution. However, the current average fee for a combination of medical and elderly care institutions is around 3,000 yuan, which brings an economic burden to the disabled elderly and their families. At present, the amount of nursing subsidies in Hohhot is relatively small, and the long-term care insurance system is still in its infancy, which cannot effectively improve the ability to pay for the disabled elderly.

5. Countermeasures to Resolve the Contradiction Between Supply and Demand of Long-term Care Service for the Disabled Elderly in Hohhot

5.1 Optimize Resource Allocation and Rationally Plan Financial Investment

In order to solve the current problem of the low occupancy rate of medical and elderly care institutions, the government needs to optimize the resource allocation of public and private medical and elderly care institutions, and improve the pertinence of financial investment. First of all, it is necessary to strengthen the construction of nursing service facilities in public medical and nursing institutions, conduct vocational training for nursing staff, and improve the quality of services. Second, preferential policies will be implemented for private institutions that meet industry standards to reduce the price of nursing services. At the same time, increase the supervision and management of private institutions, and crack down on the behavior of arbitrary and high fees. Third, rationally plan the construction of nursing beds in medical and nursing institutions. Change the current policy of subsidizing bed size. According to the occupancy rate of the institution, the construction and planning of nursing beds are carried out, and then subsidies are given according to the actual number of elderly people living in and the degree of disability.

5.2 Improve the Needs Assessment System for the Disabled Elderly

Establish a multi-dimensional evaluation system for the long-term care needs of the disabled elderly. First of all, based on the assessment of the disability level of the elderly, evaluate the long-term care service needs of the disabled elderly, including daily life care, basic medical care, rehabilitation training, spiritual comfort, cultural entertainment, and hospice care, etc. Secondly, it's necessary to understand the basic situation of the disabled elderly in advance, such as providing more spiritual comfort and other services for the disabled elderly who lack family care and live alone, and improve the pertinence of nursing services. Finally, regular satisfaction

assessments are conducted to understand whether the nursing service needs of the disabled elderly have been met and the changes in the needs of the disabled elderly, so as to adjust the supply of long-term nursing services in a timely manner, and rationally allocate nursing service resources.

5.3 Strengthening Nursing Service Talent Team Construction

To solve the current shortage of nursing personnel supply, we can start from the following aspects: First, to create a good social environment and enhance the social identity of nursing staff, we can use the self-media platform to strengthen professional publicity and conduct correct public opinion orientation. Second, the salary structure system should be reasonably designed to match the salary level of nursing staff with the existing charging standards of medical and nursing institutions. Improve the enthusiasm of nursing staff through performance appraisal and other methods. Third, expand the career development space of nursing staff. On the one hand, a professional title system can be established, and professional titles can be assessed according to the professional level of nursing staff, the satisfaction of service objects, and working years. It can also be considered to be included in the medical system for overall planning and management to promote the mutual conversion of medical, nursing and nursing staff (Xuemeng Ding & Jian Sun, 2019). On the other hand, employers should scientifically and reasonably assist nursing staff to formulate personal career development plans to clarify the path of job promotion.

5.4 Improve the Institutional Guarantee of Long-term Care Services

The long-term care insurance system in Hohhot is in its infancy, and it may face some problems during the construction and implementation of the system. On the one hand, international experience can be used for reference; on the other hand, it is necessary to formulate and improve the long-term care insurance system that conforms to the city's actual conditions. Through this investigation and research, it is found that the current nursing expenses of the integrated medical and nursing institutions in Hohhot are generally high, the payment level of the disabled elderly is low, and the quality of long-term care services is low, which cannot effectively meet the nursing needs of the disabled elderly. Therefore, the cost of long-term care should be borne by the government, enterprises and individuals. At the same time, in order not to increase the burden on the individual, part of the funds can be set aside from the personal account of medical insurance to purchase long-term care insurance, and a co-ordination and mutual aid system for elderly care services can be established (Shuhuan Yan & Feng Lin, et al., 2015). In addition to establishing a universal long-term care insurance system, we should also improve the nursing subsidy system for low-income and other difficult and disabled elderly groups. Increase government subsidies and purchase of nursing services to ensure the basic nursing needs of these disabled elderly.

Fund Project

Project "Research on the supply and demand of long-term care for the disabled elderly under the mode of combining medical care and nursing—Taking Hohhot as an example" supported by Inner Mongolia University Training Program of Innovation and Entrepreneurship for Undergraduates (Grant No.202110229).

References

- Sifeng Zhang, Min Tang, Miao Zhou. (2016). Research on the framework of the elderly care system based on the analysis of the living conditions of the disabled elderly in my country. *Journal of Xi'an Jiaotong University(Social Science Edition)*, 36(02), pp. 83-90.
- Hohhot Statistics Bureau. Bulletin of the Seventh National Population Census of Hohhot(No. 4). Retrieved from http://tjj.huhhot.gov.cn/tjyw/tjsj/tjgb/202105/t20210527_943455.html.
- Hohhot Civil Affairs Bureau. The work of elderly care services in 2021. Retrieved from http://www.huhhot.gov.cn/zwdt/bmdt/202107/t20210714_1003339.html.
- Peiye Cao, Qinghua Zhao, et al. (2018). Development and reliability and validity of the long-term care needs assessment questionnaire for the disabled elderly in nursing homes. *Journal of Nursing*, 33(12), pp. 84-88.
- Xuemeng Ding, Jian Sun. (2019). The status quo and trend of research on elderly care workers in my country in the past two decades. *Jiangan Academic*, 38(06), pp. 26-34. DOI: 10.16388/j.cnki.cn42-1843/c.2019.06.003.
- Shuhuan Yan, Feng Lin, et al. (2015). Research on the influencing factors and countermeasures of elderly nursing service demand for the elderly. *Chinese General Medicine*, 18(15), pp. 1775-1779.

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