



# Study on the Choice and Influencing Factors of Institutional Old-Age Care

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**Abstract.** Objective: To understand the choice and influencing factors of institutional care for the elderly, which can provide reference for the development and construction of institutional care for the elderly, so as to meet the requirements of the development of new quality productivity of the government. Methods: According to the data of the (CLHLS) in 2018, the influencing factors of institutional care choice were analyzed by  $\chi^2$  test and binary Logistic multivariate regression model. Results: 234 people, accounting for 3%, chose institutional nursing. Residence, age, years of education, marital status, self-care ability, retirement system, family income and number of children all affect the choice of the elderly ( $P < 0.05$ ). Conclusion: 3% of the elderly choose institutional nursing, which is consistent with the current policy arrangement of our country. Institutional pension is affected by residence, age, years of education, spouse or not, self-care ability, retirement system, family annual income and the number of children. With the intensification of the aging situation, it is necessary to consider the above factors to promote the scientific decision-making of institutional elderly care, highlighting the significant value of this study.

**Keywords:** institutional care for the elderly, selection status, influencing factors, CLHLS, aging.

## 1 Introduction

The global population aged 65 and over is expected to more than double, rising from 761 million in 2021 to 1.6 billion in 2050, according to UN projections. The population aged 80 and over is growing faster [1]. Foreign countries have been aging for a long time and have formed relatively mature pension systems. Institutional pension has become an important part of Japan's pension system [2]. Institutional pension systems in the United States, Britain, Switzerland and Germany have also formed standardized, professional and personalized systems [3]. Data from the National Bureau of Statistics shows, by the end of 2023, China has 216.76 million people aged 65 and above, accounting for 15.4% of the country's population, an increase of 0.5 percentage points over the end of 2022 [4]. With the increasingly serious aging of the population and the trend of miniaturization of family structure, the traditional home care can no longer

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meet the needs of the development of modern society. Therefore, institutional elderly care plays an important role in the construction of the elderly service system. However, due to the large number of pension institutions in China, complex affiliation and property rights, large differences in scale and type, and scattered spatial locations, it is difficult for the authorities to accurately count the number of people living in pension institutions across the country [5]. Institutional old-age care refers to the old-age care mode in which the elderly leave their familiar family living environment and move into specialized old-age care institutions to receive care [6]. The institution provides comprehensive services including diet, daily living, hygiene, life care, health management and recreational activities [7]. Most of the existing studies focus on the willingness of the elderly to choose institutions for old-age care in the future, taking various provinces and cities as research objects, and there are few large sample studies [8-19]. According to this research to understand the choice of institutional care for the elderly in China and the influencing factors, which can provide references for the development and construction of old-age care institutions.

## 2 Information and Methods

### 2.1 Data Sources

The data in this study were collected from the 2018 data of the Chinese Health Survey of Aging (CLHLS) jointly conducted by the Chinese Center for Disease Control and Prevention and the Research Center for Healthy Aging and Development of the National Institute of Development of Peking University [20]. This health survey adopts a total of 15,874 elderly households. According to the purpose of this study, after all key independent variables were screened out to be complete and missing or unknown information was excluded, a total of 9311 effective samples were obtained.

### 2.2 Variable Selection and Definition

**Dependent variables.** The dependent variable studied in this paper is "institutional nursing care". According to the answers to the question "who do you live with now" in the questionnaire, there are two categories: not choosing institutional nursing care and choosing institutional nursing care. The first two options "family and living alone" are classified as not choosing, and the third option is classified as choice.

**Independent variables.** Relevant studies [9,16,19,21] have shown that demographic characteristics, health status, family structure and economic conditions will affect the elderly's choice of institutional care. Based on this, the study included independent variables: basic demographic characteristics of the elderly (gender, age, place of residence, years of education), health status of the elderly (self-care ability), family structure (marital status, number of children), socio-economic characteristics (retirement system, insurance status, local living standards and annual family income).

### 2.3 Research Methods

SPSS25.0 statistical software was used for data processing. First, each selected independent variable was assigned, as shown in Table 1. Then, the statistical description method was used to analyze the selection of institutional pension in China, and the influential factors were analyzed by  $\chi^2$  test and binary Logistic multiple factor regression, with the test level  $\alpha=0.05$ .

**Table 1.** Assignment of each variable.

Variable classification	Variable name	Assignment
Demographic characteristics	Place of residence	Village=1, town=2
	Gender	Male=1, female=2
	Age	65-74 =1, 75-84=2, $\geq 85=3$
	Years of education	0=1, 1-9=2, $\geq 10=3$
Health status	Self-care status	Unrestricted=1, somewhat limited=2, very limited=3
Socioeconomic characteristics	Retirement system	No=0, yes=1
	Total annual revenue	0-49999yuan=1, $\geq 50000$ yuan=2
	Local standard of living	Difficulty=1, average=2, wealth=3
	Endowment insurance	No=0, yes=1
Family structure	Marital status	Married=1, single =2
	Number of children	$\geq 5=1$ , 1-4=2, 0=3
Dependent variable	Institutional pension	Don't select=0, select=1

## 3 Results

### 3.1 Descriptive Analysis of the Choice of Institutional Old-Age Care Mode and Influencing Factors

In a total of 9311 valid samples of elderly households included in this study, 9077 (97%) people do not choose institutional old-age care, while 234 (3%) people choose institutional old-age care. It can be seen that the vast majority of elderly people still choose non-institutional old-age care. The Factors such as residence, age, years of education, marital status, self-care ability, retirement system, family income and number of children were statistically significant ( $P < 0.05$ ). Gender, local standard of living and endowment insurance were not statistically significant ( $P > 0.05$ ). Data cross analysis is shown in Table 2.

**Table 2.** Difference analysis of influencing factors of institutional elderly care choice (n=9311).

Variable	Group	Don't select[n (%)]	Select[n (%)]	Chi-square test	
				$\chi^2$	P

Place of residence	Village	4568 (50.3)	49 (20.9)	78.795	0.000
	Town	4509 (49.7)	185 (79.1)		
Gender	Male	3592 (39.6)	83 (35.5)	1.607	0.205
	Female	5485 (60.4)	151 (64.5)		
Age	65-74	2027 (22.3)	17 (7.3)	40.175	0.000
	75-84	2212 (24.4)	48 (20.5)		
	≥85	4838 (53.3)	169 (72.2)		
Years of education	0	5164 (56.9)	134 (57.3)	25.767	0.000
	1-9	3539 (39)	75 (32.1)		
	≥10	374 (4.1)	25 (10.7)		
Self-care status	Unrestricted	5691 (62.7)	96 (41)	63.707	0.000
	Somewhat limited	2179 (24)	69 (29.5)		
	Very limited	1207 (13.3)	69 (29.5)		
Retirement system	No	8061 (88.8)	172 (73.5)	52.180	0.000
	Yes	1016 (11.2)	62 (26.5)		
Total annual revenue	0-49999	5819 (64.1)	115 (49.1)	22.092	0.000
	≥50000	3258 (35.9)	119 (50.9)		
Local standard of living	Difficulty	1114 (12.3)	25 (10.7)	0.537	0.764
	Average	6483 (71.4)	170 (72.6)		
	Wealth	1480 (16.3)	39 (16.7)		
Endowment insurance	No	5747 (63.3)	146 (82.4)	0.083	0.773
	Yes	3330 (36.7)	88 (37.6)		
Marital status	Married	3559 (39.2)	34 (14.5)	58.629	0.000
	Single	5518 (60.8)	200 (85.5)		
Number of children	≥5	3705 (40.8)	83 (35.5)	40.100	0.000
	1-4	5207 (57.4)	128 (54.7)		
	0	165 (1.8)	23 (9.8)		

### 3.2 Binary Logistic Regression Analysis of the Choice and Influencing Factors of Institutional Old-Age Care

In this study, institutional pension was taken as the dependent variable and multiple factors were classified as independent variables for binary Logistic regression analysis. The results showed that the influencing factors of the elderly, such as residence, age, years of education, spouse or not, self-care ability, retirement system, family annual income and number of children, had statistical significance ( $P < 0.05$ ). For detailed analysis, see Table 3.

**Table 3.** Logistic regression analysis of influencing factors of institutional pension choice.

Variable	Group	B	Wald	P	OR	OR 95%CI	
						low	high
Place of residence	Village*						
	Town	1.133	45.184	0.000	3.106	2.232	4.322

	65-74*						
Age	75-84	-0.712	5.853	0.016	0.490	0.275	0.873
	≥85	-0.019	0.010	0.920	0.981	0.679	1.419
	0*						
Years of education	1-9	-0.815	8.100	0.004	0.442	0.252	0.776
	≥10	-0.676	6.536	0.011	0.509	0.303	0.854
	Unrestricted*						
Self-care status	Somewhat limited	-0.927	28.161	0.000	0.396	0.281	0.557
	Very limited	-0.495	7.468	0.006	0.610	0.428	0.869
Retirement system	No*						
	Yes	0.690	13.060	0.000	1.993	1.371	2.898
Total annual revenue	0-49999*						
	≥50000	0.312	4.542	0.033	1.367	1.025	1.821
Marital status	Married*						
	Single	1.165	28.580	0.000	3.206	2.091	4.914
	≥5*						
Number of children	1-4	-1.980	54.627	0.000	0.138	0.082	0.233
	0	-1.715	43.511	0.000	0.180	0.108	0.300

\*Control group

## 4 Discussion

### 4.1 Current Situation of Institutional Pension Choice

The study shows that the proportion of institutional nursing care is 3%, which is roughly consistent with the pension pattern of "9073" or "9064" in China over the years, that is, 90% of the elderly are advocated at home, 6% or 7% of the elderly are supported in community institutions. 3% or 4% of the elderly live in institutions such as nursing homes [22]. By the end of 2023, there will be 216.76 million people aged 65 and above in China, and about 6.5 million elderly people will choose institutional care for the elderly, while there are 8.201 million beds for the elderly [23], which indicates that the number of beds in pension institutions has far exceeded the number of people who choose institutional care for the elderly. Since China's pension institutions still lack some supervision and protection, and have not yet formed high-quality head pension institutions, the news has occasionally reported the incident of elder abuse in pension institutions. When the elderly lack family happiness, it is easy to produce negative emotions, but also affect the health status;. Foreign studies have also found that nursing institutions regulate the activities of the elderly and reduce their autonomy and independence [24]. From this revelation, the supply of institutional elderly care may be excessive, and it is time to design the supply service system to do better, bigger and stronger to meet the policy requirements of the government's new quality productivity development.

As of April 2022, 29.1% of the total population in Japan are aged 65 and above who are receiving long-term care services in institutions [25]. In the UK, the proportion of people aged 65 and over in institutional care will reach 20.3% by 2020 [26]; The occupancy rate of elderly welfare institutions in Sweden is more than 15% [3]; However, only about 3% of the elderly in China choose institutional pension, which shows that with the aging of China, institutional pension has great room for development.

## 4.2 Influencing Factors of Institutional Pension Choice in China

It is known from the research that some key factors have a significant impact on the choice of institutional care, which is similar to some previous research results [27]. Since the included variables cannot include all aspects that affect the life of the elderly, the results of the research may be different, but from the proportion of the number of people who choose institutional care for the elderly in the total sample, it can be found that the choice of institutional care for the elderly is not the mainstream way in China, and it is also affected and restricted by many factors.

The demographic characteristics of age, place of residence and years of education have significant effects on the choice of institutional care, but there is no significant difference in gender. With the increase of the age of the elderly, their occupational attributes will become weaker and weaker, and the children are busy in their careers, often lonely at home, choose institutional pension can get the company of peers, but when the age of 85 and above, the influence of this factor is not significant. With the rapid development of urbanization of society, more and more people in rural areas move to cities. The conditions of urban pension institutions are obviously better than those in rural areas, Urban elderly are more willing to try institutional pension than rural ones. The difference in education level will also affect the choice of the elderly. With the life is becoming more and more information-based, and the elderly with more education will have a stronger ability to acquire information, easier to accept new things different from the traditional ways of supporting the elderly.

The health status of the elderly has a significant impact on the choice of institutional care, and the regression coefficient of this variable is negative, that is, compared with the elderly whose life is greatly restricted, the healthy elderly who are not restricted are less willing to choose institutional care. Healthy and self-reliant elderly people are still able to arrange their own lives and prefer to live alone. Based on the career of their children and some family factors, the elderly with limited life will increase their willingness to seek institutional care, rely on professional institutional service personnel, and can get comprehensive care, including life and health.

Family structure also has a significant impact on the choice of institutional care. The regression results show that single elderly people are more willing to choose institutional care than those with spouses. On the one hand, with the increase of age and diseases, the self-care ability of single elderly people will become weaker, which may be accompanied by some complicated drug treatment and rehabilitation activities. Professional service personnel in old-age care institutions can get better care. Elderly people with spouses can help each other and take care of each other in life, and the vast majority of them will choose home care for the elderly. In terms of children, the elderly in

families with more children are often less willing to choose institutions for old-age care. The traditional way of providing for the elderly in China is that children live together, and the traditional concept of raising children for old age is deeply rooted [28-29]. Long-term affection and trust will make the elderly feel more secure in their hearts, and elderly people with few children are gradually accepting institutional pension to reduce the burden on their children. With the serious decline in the birth rate, the choice of future retirement is also quietly changing.

Social and economic characteristics also have significant influence on the choice of institutional pension. Usually, the elderly who enjoy the retirement system have stable jobs, good welfare benefits, and also enjoy the corresponding security system. Choosing institutional pension will not increase the additional economic burden on the family, so the willingness is stronger. For families with higher annual income, the elderly are more willing to choose institutional pension, whether it is their own financial sources or children's partial support, which plays a role in promoting the choice of institutional pension. Although pension insurance and local standard of living have no significant impact on the choice of institutional pension, But the essence is also contained in the economic conditions of the family, the living standard of this factor due to the subjective assessment is strong, there is no objective classification criteria, so the result may bring a certain deviation.

## 5 Conclusion

First, 3% of the elderly choose institutional pension, consistent with China's policy arrangements. However, compared with foreign countries, the selection ratio is low, indicating that the institutional pension has great potential. Second, the elderly's age, place of residence, years of education, self-care ability, marital status, number of children, retirement system and family annual income have a significant impact on the choice of institutional pension ( $P < 0.05$ ). The advantages of institutional care for the elderly lie in the specialization of management, the centralization of services, and good living conditions, but there are also challenges that require the elderly to adapt to the new environment, rebuild interpersonal relationships, and increase the cost of living. The choice of the way to support the elderly is a decision that needs to be made after considering various circumstances of the family, and it is also a dynamic process. With the diversification of old-age care methods, especially the aging, the future construction of old-age care institutions needs to be based on the actual needs of the elderly, social development and national policies and other aspects of the joint support, in order to achieve high-quality and healthy institutional old-age care life for the elderly. The result of this study is to promote the scientific decision-making of institutional elderly care, demonstrating its evidence-based value.

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