



# The Influence of Characteristic Factors of Elderly Care Institutions on Self-awareness of Elderly People with Chronic Diseases

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**Abstract:** Objective: To understand the influence of characteristic factors of elderly care institutions on the level of self-awareness of the elderly with chronic diseases. Methods: A total of 428 elderly people with chronic diseases in elderly care institutions in Tangshan City were interviewed with the general information questionnaire, the characteristic factors questionnaire of elderly care institutions, and the Chinese version of the self-awareness scale. Results: The total score of the elderly with chronic diseases was  $57.65 \pm 15.09$ . Multiple linear regression showed that the influencing factors of the elderly with chronic diseases were household registration, income status, economic source, physical pain status, room number, family visit frequency, activity frequency, and nursing skills ( $P < 0.05$ ). Conclusion: The general level of self-awareness of the elderly with chronic diseases in the elderly care institutions in Tangshan is average, and there is great room for improvement. The nursing staff in institutions should pay attention to the autonomy of the elderly with chronic diseases, improve their level of self-awareness.

**Keywords:** characteristic factors of pension institutions; chronic diseases; the elderly; self-awareness; influencing factors

## 1. Introduction

According to statistics from the National Bureau of Statistics of China, by the end of 2023, the number of people aged 60 and above had reached 297 million in China, reflecting a deepening trend of population aging. As the elderly represent a group with a high incidence of chronic diseases [1], access to elderly care and the development of elderly care systems have become urgent priorities. In China, over 180 million elderly individuals suffer from chronic diseases. With advancing age, people experience varying degrees of physical degeneration. Coupled with the impact of chronic diseases, these individuals often experience declines in physical and mental health, as well as quality of life. This places particular emphasis on the self-care abilities of the elderly with chronic conditions [2]. Self-awareness is a state of perceiving and recognizing one's own needs and goals and behaving accordingly [3]. Taking elderly care institutions in Tangshan City, Hebei Province, as the subject, this study investigates the self-awareness level of the elderly with chronic diseases and analyzes the influence of institution factors on their self-awareness. It aims to provide a basis for improving the self-care abilities of the elderly with specific chronic conditions.

## 2. Objects and Methods

### 2.1 Research Objects

The research adopted convenience sampling. From June 2023 to June 2024, 428 elderly individuals with chronic diseases were selected from nine elderly care institutions across seven districts in Tangshan City. Inclusion criteria include: (1) age  $\geq 60$  years; (2) duration of stay in the institution  $\geq 6$  months; (3) meeting international diagnostic criteria for chronic diseases. Exclusion criteria include: (1) diagnosed with mental disorders or dementia; (2) hearing or intellectual impairments.

### 2.2 Survey Tools

(1) Questionnaire on General Information: Self-designed, involving 15 items (e.g., age, education).

(2) Questionnaire on Institution Factors: Self-designed, involving 16 items (e.g., duration of stay, number of occupants per room).

(3) Perception of Elderly Autonomy Scale – Simplified Chinese Version (PEAS-SCV) [4]: Developed by Wang Bo based on the characteristics of the elderly in China. A higher score indicates a higher level of self-awareness. The Cronbach's  $\alpha$  coefficient is 0.910.

### 2.3 Statistical Method

Descriptive statistics included frequency, percentage, mean, and standard deviation. Univariate analysis was performed using t-tests and variance analysis. Variables with statistical significance were considered independent variables, while the self-awareness score of the elderly with chronic diseases was the dependent variable for multiple linear regression. The significance level ( $\alpha$ ) was set to 0.05.

## 3. Results

### 3.1 Self-Awareness Level of the Elderly with Chronic Diseases

According to the results, the average self-awareness score is  $57.65 \pm 15.09$ .

### 3.2 Univariate Analysis of Self-Awareness of the Elderly with Chronic Diseases

The analysis results are summarized in Table 1.

**Table 1. General Demographic Statistics and Univariate Analysis of Self-Awareness (n=428; x±s)**

Variable	Category	Number of Cases	Self-Awareness Score	t/F Value	P-Value
Age	60 ~	106	55.62±15.00	5.281	0.001
	70 ~	131	60.57±14.63		
	80 ~	165	57.98±14.46		
	90 ~	26	49.04±17.86		
Education	Primary School or Below	172	47.04±11.64	132.784	< 0.001
	Middle or Secondary Technical school	193	62.25±12.54		
	College or Above	63	72.51±10.23		
Income	< 1000	133	44.62±10.94	234.202	< 0.001
	1,000-3,000	96	50.88± 9.60		
	3,000-5,000	121	65.56± 8.43		
	> 5,000	78	75.92± 6.75		
Bodily Pain	None	68	68.10±11.78	58.047	< 0.001
	Mild	176	61.58±13.77		
	Moderate	184	50.02±13.61		
Nutrition Intake	Reasonable	177	55.16±15.09	5.237	0.006
	Normal	186	60.21±14.37		
	Unreasonable	65	57.09±16.09		
Number of Occupants	Single Room	89	70.34±11.00	59.060	< 0.001
	Double Room	193	56.92±13.89		
	Dormitory	146	50.87±13.99		
Family Visit	Never	18	44.11± 9.03	35.526	< 0.001
	Annually	59	48.73±13.08		
	Monthly	192	55.02±13.54		
Staff Professionalism	Weekly	159	65.66±14.08	8.758	< 0.001
	Very Bad	62	52.57±15.39		
	Bad	130	54.35±13.90		
	Good	100	59.44±14.19		
	Very Good	136	61.79±15.45		

### 3.3 Multivariate Analysis of Self-Awareness of the Elderly with Chronic Diseases

**Table 2. Multiple Regression Analysis of Self-Awareness Scores**

Item	RC	Standardized RC	t Value	P-Value
Constant	33.459	----	6.873	< 0.001
Income	7.714	0.563	11.002	< 0.001
Bodily Pain	- 3.922	- 0.187	- 6.357	< 0.001
Number of Occupants	- 1.929	- 0.093	- 2.968	0.003
Family Visit	1.396	0.075	2.446	0.015
Staff Professionalism	1.234	0.087	2.928	0.004

Note: RC=Regression Coefficient,  $R^2=0.734$ , Adjusted- $R^2=0.726$ .

## 4. Discussion

### 4.1 Influence of General Demographic Factors on Self-Awareness

For the elderly with chronic diseases in care institutions, income status positively correlates with self-awareness. Higher-income individuals can afford more choices and autonomous decisions. They possess greater access to information related to chronic diseases and are more inclined to understand their own conditions and take necessary precautions. These practices exemplify their high autonomy [5]. Finally, for elderly individuals with chronic diseases, the self-awareness decreases as the degree of bodily pain rises, because somatic pain can stimulate brain nerves and directly affects subjective emotions. The suffering due to bodily pain impacts the elderly's self-awareness level [6], representing a long-term negative factor undermining the emotions and self-awareness of elderly individuals with chronic diseases.

### 4.2 Influence of Institution Factors on Self-Awareness

The findings indicate a negative correlation between the number of occupants per room and the self-awareness of elderly individuals with chronic diseases in care institutions. Generally, elderly individuals prefer a quiet environment and are accustomed to having an afternoon nap, which is particularly important for those with chronic diseases, as rest is vital for disease control [7]. Frequency of family visits is positively correlated with the elderly's self-awareness level, which is consistent with the findings of Han Mengdan et al. [8]. Families are a crucial source of both economic and emotional support for the elderly. Family members should visit more frequently and pay attention to the psychological well-being of their elders in care institutions, rather than merely offering financial support. Furthermore, staff professionalism is also positively correlated with the self-awareness of elderly individuals with chronic diseases in care institutions. As chronic diseases are long-term conditions, the professionalism of nursing staff directly dominates the stability of chronic conditions and is a key driver for the elderly's autonomy.

In summary, more attention should be paid to the influence of institutional factors on elderly individuals with chronic diseases residing in care institutions, as well as the significance of these factors on chronic disease control. This research provides a reference for elderly care institutions in encouraging self-management of chronic diseases, enhancing their self-awareness, and fostering a proactive attitude towards aging.

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