

Influencing Factors Study on Elderly Employment Status

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Abstract

The elderly employment is an important influence on old people life and the work. Using sampling survey data of the 16 boroughs of Beijing, this paper analyses the elderly employment influencing factor. Through the cross table it describes the basic features of the employment of the elderly, then tests significance of each factor by the multi-variable logistic regression, finding age, gender, health status and pension are significant variables, the number of children, educational level of re-employment are not significant variables.

Key word: Elderly employment; Logistic regression model; Total population; Influencing factor study; Health condition

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INTRODUCTION

Beijing is the capital of China, not only economic development rapidly at the forefront of the country, the demographic transition stage is earlier than the nationwide average condition. Elderly has exceeded 1/5 of the total population in Beijing. There have the total of 13,163,000 people, including 2,793,000 elderly people, accounting for 21.2% of the total population, which is from the report of elderly population information and development situation of Beijing in 2013.

1. ELDERLY POPULATION PROFILE IN BEIJING

1.1 The Proportion Trend of Elderly Accounting for the Total Population in Beijing

Elderly is divided by age that 60-69 year old is called young elderly, approximately 70-79 years old is called middle elderly population, aged above 80 years old is senior elderly. As Figure 1 showing, in the past 30 years, there were rapid growth in the number of elderly population. There was a growth of 4.47% for young aged people from 5.2% to 9.94% and a growth of 4.26% for middle aged people from 2.7% to 6.96%, an increase of 2.4% for senior elderly from 0.62% to 3.02%. The young-middle elderly people account for 85% around of the total number of elderly people.

1.2 Health Condition of Elderly

It shows that 70% of elderly have good physical condition, 30% of the elderly are poor from the sixth census data. Generally speaking, the health of aged people is in good condition and the increasing longevity in Beijing.

1.3 Education Level of Elderly

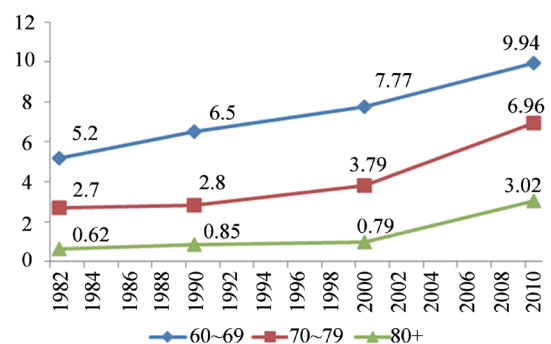


Figure 1
The Proportion Trend of Elderly Accounting for the Total Population in Beijing

Note. Sources: The third, four, five, six population census data consolidation.

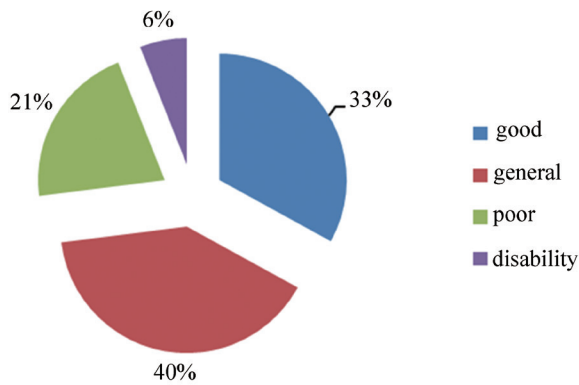


Figure 2
Health Condition of Elderly

As Figure 3 shown, the education level of the elderly in Beijing is higher than that of the nationwide. Elderly with high school are 3.98% higher than nationwide, elderly with college education are 1.94% higher than nationwide, elderly with undergraduate are 8.33% higher than nationwide, elderly with graduate are 0.31% higher than nationwide.

1.4 Profession Status of Elderly

The industry status of elderly people has changed in the past 30 years. There was large decline for the person in charge of the unit, professional and technical personnel, and equipment operators, but business and service personnel and others have increased, agriculture, animal husbandry and fishery have a little change.

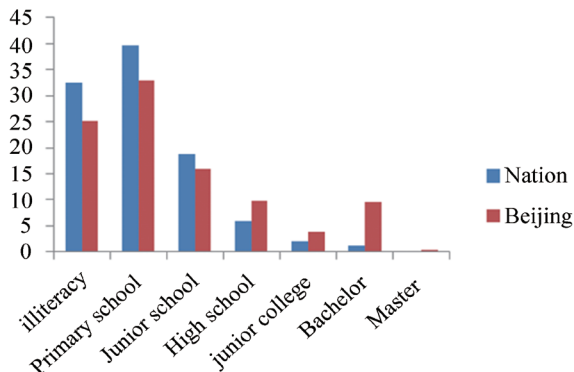


Figure 3
Education Level of Elderly

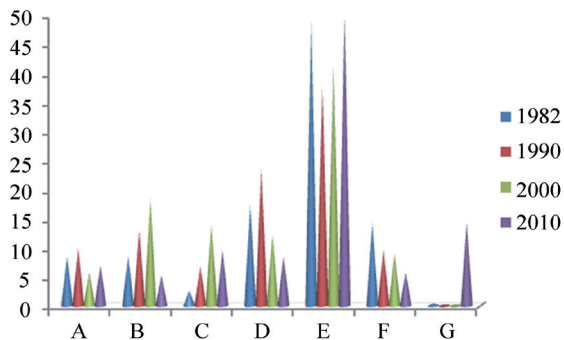


Figure 4
Profession Status of Elderly

In Figure 4, A—the person in charge of the uni, B—professional and technical personnel, C—business and service personnel, D—the clerk, E—agriculture, animal husbandry and fishery, F—equipment operators, G—others.

2. ANALYSIS OF INFLUENCE FACTORS OF YOUNG-MIDDLE-ELDERLY EMPLOYMENT IN BEIJING

In order to understand the current situation of young-middle-elderly employment, the author organized undergraduate to investigation and research in 16 districts of Beijing (Dongcheng, Xicheng, Haidian, Chaoyang, Fengtai, Shijingshan, Tongzhou, Fangshan, Changping, Tai Hing, Yanqing, Shunyi, Mentougou, Huairou, Miyun, Pinggu) in the summer of 2013, and received 1,420 valid questionnaire. Using of stata10,we analyzed the influence factors on the elderly re-employment.

2.1 Gender and Employment

Seen from Table 1, employment of male elderly accounted for 27.36% of male elderly and employment of female elderly accounted for 18.96% of female elderly, the employment proportion of male elderly is larger than that of female elderly The main reason is that the labor market prefer to male, housework need female, physical condition and skills of female aren't good as male, another reason is the retirement age. Usually men retire at the age of 60, women retire at the age of 55. After the 60 years old, some of the female are no longer work; some are busy with housework in order to support the employment of spouses and take care of the third generation. Thus employment rate of female is greatly lower than the male.

Table1
Gender and Employment

	Female	Male
Employed (%)	27.36	18.96
Not employed (%)	72.64	81.04

2.2 Age and Employment

The ratio was up to 43.55% employment of elderly aged 60-64, it dropped to 30.21% for 65-69 of the elderly's employment proportion, and continued to decline to 18.18% for 70-79 years old people, and the proportion of employment of elderly people over the age of 80 was 7.32% from Table 2.

Elderly employment will gradually reduce with the increase of age. Chi square test $p=.000$, less than .05, which shows that the elderly employment will have significant differences in age.

Table 2
Age and Employment

age	60-64	65-69	70-79
employed	43.55	30.21	18.18
not employed	56.45	69.79	81.82

2.3 Education and Employment

Education is divided into the five levels of illiteracy, primary, junior, high, technical school or high school, college or above. From Table 3 we found the ratio of elderly employment increased with level of education increasing in the city, and the proportion of employment in the college education of the elderly was higher than other levels of education of elderly people, but proportion of education for junior and senior high school was lower than the proportion of education degree of primary school employment, explaining the effect of education on employment was not significant after controlling the other variables, which need to examine the influence of education level on employment for the elderly.

Table 3
Education and Employment

	Illiteracy	Primary school	Junior school	High school	College
Employed (%)	13.58	27.68	23.28	18.52	32
Not employed (%)	86.42	72.32	76.72	81.48	68

2.4 Health and Employment

It can be seen from Table 4, health is divided into poor, good, general, finding that the proportion of employment with bad body was lower than the proportion of employment with general body 1 (19.7%) and good (32.45%). As we often say “the body is the capital of

revolution”. A person’s body is more healthy, more positive and energetic mentality, his employment desire is stronger, which is a positive correlation between health and employment.

Table 4
Health and Employment

	Poor	General	Good
Employed (%)	17.26	19.70	32.45
Not employed (%)	82.74	80.30	67.55

2.5 Number of Children and Employment

Seen from Table 5, with the increase in the number of children, the proportion of employment of the elderly was downward, economy need is possible interpretation for employed elderly. Although most of the urban retired elderly people have certain pension, but part of the old people should burden the huge spending on marriage expenses of sons and daughters and improve living conditions under the rapid growth of CPI, still having a strong desire to continue to work. The elderly obtained more support from the children when number of children are more. From the sixth census data (see Table 6), support from other members of the family ranked second in the major source of income for the elderly. On the other hand, housework burden is heavy when the elderly have many children, also limiting the employment.

Table 5
Number of Children and Employment

	One	Two	Three	Four	Five
Employed (%)	28.57	31.25	17.31	17.50	9.09
Not employed (%)	71.43	68.75	82.69	82.50	90.91

Table 6
The Major Source of Life of the Elderly Aged 65 Above

		Income	Pension	Minimum living guarantee	Property income	Support from other members of the family	Others
Tatal	The country	19.68	24.52	4.69	0.32	48.82	1.97
	Beijing	2.38	73.17	3.83	0.35	19.41	0.85
City	The country	3.57	67.30	2.69	0.56	24.25	1.64
	Beijing	0.95	86.62	1.27	0.24	10.23	0.69
Town	The country	14.26	26.52	5.04	0.43	51.47	2.28
	Beijing	4.27	42.58	8.24	1.19	42.17	1.55
Countryside	The country	28.49	4.86	5.48	0.18	58.97	2.02
	Beijing	9.06	14.82	15.44	0.66	58.58	1.43

2.6 Pension and Employment

Under normal circumstances, work motivation of the elderly is to increase income, relieve loneliness and so on. But work participation rate will drop when income or social security after retireent is better than before,

so pension with or not may become a major factor in whether or not to participate in the work of the elderly. It is seen from Table 7, the employment proportion of older people with no pension is higher than that with pension.

Table 7
Pension and Re-Employment

	With pension	Without pension
Employed (%)	20.57	31.63
Not employed (%)	79.43	68.37

2. EMPIRICAL ANALYSIS WITH LOGISTIC REGRESSION MODEL

Logistic regression model is two categorical dependent variables for the multivariate regression analysis using the most common quantitative analysis method, basic equations of logistic regression is as follows:

$$\ln\left(\frac{p}{1-p}\right) = b_0 + \sum b_i \times x_i$$

In this study, dependent variable is employment status for the elderly ($p=1$ represents work, $p=0$ represents not work), P represents the probability of employment, x_i represents that all the factors influencing the re-employment of old people in the city, b_0 and b_i are the regression coefficient of each variable. Logistic analysis is made by putting the variable in cross table into the regression equation.

Logistic regression result showed that the influence factors of elderly employment were age, gender, health status and the pension after controlling other variables, but the level of education and number of children wasn't significant.

Table 8
Logistic Regression

	OR ratio	Standard	Z	Level of significance
60-64	3.80	1.47	3.44	0.001
65-69	2.18	0.75	2.24	0.025
70-79	1.17	0.44	0.43	0.670
>80				
Gender (Male=1, Female=0)	1.83	0.48	2.33	0.02
Illiteracy	0.72	0.37	0.64	0.26
Primary school	1.59	0.66	1.12	0.70
Junior School	1.06	0.43	0.15	0.48
High School	0.62	0.32	0.91	0.23
Poor	0.44	0.13	-2.86	0.004
General	0.56	0.21	-2.41	0.143
Good				
Number of children	0.84	0.11	-1.35	0.178
pension	0.46	0.14	-2.56	0.001

From the point of age, results showed that proportion of the elderly employment had declined, with the increase of age. Compared with the elderly above 80 years old, 60-64 years old of the elderly were 3.8 times, 65-69 years old for the elderly was 2.18 times. It is evident that the ratio of employment will decline with the increase of age.

From the point of gender, when controlling for other variables, the possibility of employment of men elderly was 1.83 times more than women, illustrating labor participation consciousness of male elderly obviously stronger than female elderly.

However, for the education of elderly, the results were not significant when controlling for other variables. Therefore, the author thinks that the difference of employment by education is more likely to be caused by social and economic differences in other aspects of these old people. Economic situation of older people with higher level of education is better than the less educated, so employment intention isn't strong.

When controlling other variables, it was significant effect of health status of elderly employment. Good physical condition is favorable to improve old people's employment, employment possibilities of the poor and the general elderly were 0.44 times and 0.56 times than the good health of the elderly. With the improvement of health, the elderly continue to enhance the proportion of employment.

The effect of pension on elderly employment was also significant. When controlling for other variables, employment ratio of elderly with pension was 0.46 times than that of elderly without pension. It has also been proved in many studies that pension reduces the labor participation rate of the elderly.

CONCLUSION AND POLICY RECOMMENDATIONS

It can be seen that employment of aged people in Beijing is mainly decided by their personal traits. It should be aimed at different groups, taking corresponding policies according to different objects in formulating the elderly employment policy, so as to improve and enhance the quality of life of the elderly.

American President Kennedy once said, for a great nation, it is not enough only give life time, our goal should also be for the years to life with creative attitude to use these days. The problem of employment of the elderly is in relation to improve their quality of life. Elderly have not only the right to develop, and should be involved in the development of the society. Active participation can make them play heat, also can make full use of valuable human resources, conducive to social progress and development.

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