

# Analysis on the Demand of Community for Elderly People in Wuhan

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Wanying Qu, Entian Qie and Fang Wang

## ABSTRACT

With China becoming one of the countries with the largest aging population in the world, the living conditions and problems for the elderly have become more and more serious. From the point of view of China's aging population background, a community-based home care model is proposed. Taking Wuhan city as an example, based on field investigation and statistical analysis, this paper analyzes the status and development trend of the elderly in Wuhan city and comes up with the weight of the factors related to the elderly staying intention. Based on that, this paper predicted the model for the elderly of each age period preferring community nursing homes.<sup>1</sup>

## INTRODUCTION

In accordance with international standards, if the elderly people of over 60 years old were more than 10%, or the elderly people of over 65 outnumbered 7% of the total population, this nation would be named Aging country or region[1]. The statistical bulletin of the National Bureau of Statistics “2014 years of national economic and social development” displayed that, the total number of over 60 years old was 212 million in 2014 in China, accounting for the proportion of 15.5% of the total number, and older population of 65 years reached 137 million, approximately 10.1% of the total population [2]. Population aging has become China's important problem. The living conditions and problem of the old people

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<sup>1</sup>Wanying Qu, Entian Qie, Fang Wang, College of Urban Construction, Wuhan University of Science & Technology, P.R. China, 430065

have become social problems that need to be solved urgently in China. The current limitations of large family pension make social resources to support as the main base of family pension. Community can also provide a platform for social resources. “Community links family based on social resources” is the trend of the development of China's pension model.

## **RESEARCH PROGRAMS**

### **Survey Method**

In July 2015, the research team conducted a questionnaire survey on the old-age community, which is relatively simple to understand for the senior people. The questionnaire includes the basic situation of the elderly, living status and willingness of community environment and facility requirements. Survey sites are selected in some gathering area for different types of elderly people, involving 4 communities, 2 nursing homes and 1 parks. The final 62 valid questionnaires can be used in this analysis through interviews with 78 elderly people. In addition, the community staff were interviewed to understand the general situation of the community, the number of the elderly, the level of structure, community care services and so on.

### **Research Object and Basic Situation**

In the elderly being investigated, men accounted for 54.8%, women accounted for 45.2%, and the proportion of men and women was 1.2:1. To be divided according to age, 60~64 years old people accounted for 38.7%; 65~69 years old people accounted for 30.6%; 70~74 years old there accounted for 17.7%; 75~79 years old people accounted for 8.1%; and 80 years old people accounted for 4.8% (Figure 1).

## **THE WILL OF THE AGED**

In the endowment intention, the elderly living mode is affected by many factors. According to the research of related scholars [3], these factors can be summed up in the following factors: age, gender, marital status, physical condition, educational level, occupation, economic status, traditional ideas and children will. Through the questionnaire, the result obtained is shown in figure 2.

The statistical results showed that the main influence factors for the elderly people's choice of living mode are physical condition, economic condition, traditional idea, children will and the elderly people's age.

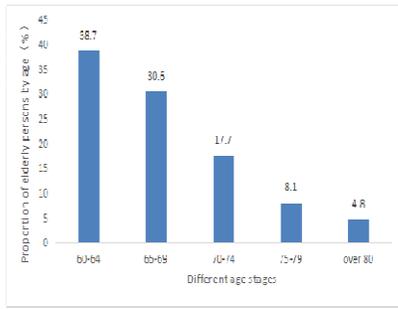


Figure 1. Proportion of different elderly people.

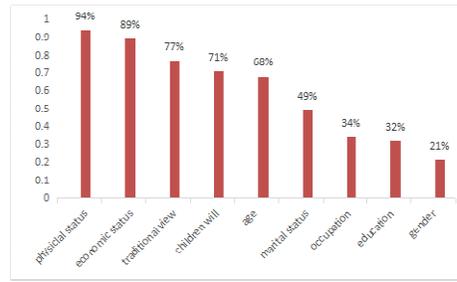


Figure 2. Influencing factors of living mode.

## OCCUPANCY DEMAND ANALYSIS

### Number of Elderly Population

According to the on-spot investigation and statistic data of elderly people over 60 years old in Wuhan city, these elderly people accounted for the total population of the community which is showed in figure 3. With the different position, the proportion at the age of over 60 also has a little difference. The minimum is 10.22%, and the maximum is 20.21%.

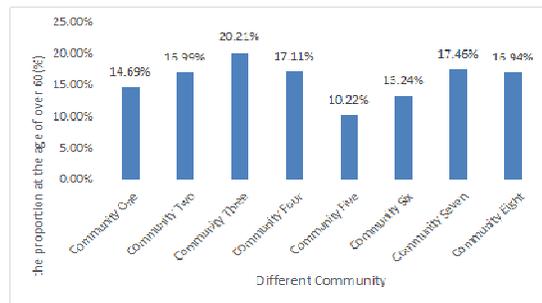


Figure 3. The On-spot Investigation Data of Elderly People over 60 Years Old.

Except the data of the smallest and the largest, the average age of the other communities is among 13%~17% and the average value is 16.07%.

According to the statistical yearbook of Wuhan, statistic data at the age of over 60 is more close to the data from the on-spot investigation, which is approximately 16.07%. Therefore, the value is effective.

According to “Code for planning and design of urban residential district”, the population size is defined as 10000~15000 in the residential community. This paper takes the minimum value of 10000 as the basic standard, and the initial value is set in the elderly population model:

$$\text{Initial Value} = 10000 * 16.07\% = 1607.$$

## Growth Rate of Elderly Population

The growth rate of aging population can reflect the dynamic index for change of the elderly population in a certain period. The growth rate of the elderly population in Wuhan is calculated by the statistical yearbook data, which is shown in table I.

TABLE I. POPULATION GROWTH RATE OVER THE YEARS IN WUHAN CITY.

	2009	2010	2011	2012	2013
growth rate	6.21%	4.57%	3.62%	4.01%	6.03%

From table I, we can see that the growth rate of the elderly population in Wuhan is relatively stable, floating up and down in 5%, so the growth rate of the elderly population is the average value of 4.8%.

## The Proportion of the Elderly Population in Each Age Group

The physical condition of the elderly at different ages is different, therefore willingness to stay in nursing homes differs with the different age groups. According to three age division of 60~69, 70~79 and over 80 years old, the survey data from 4 communities, which analyzes the proportion of different elderly population in the total population of the elderly, list in table II.

From the table, the proportion of population size at different period of elderly people is relatively stable. For each group data, the average proportion of the aged population was obtained. Among the total population of the elderly, proportion at the age of 60~69 accounts for 53.89%, proportion at the age of 70~79 accounts for 29.35%, and the proportion of over 80 is 16.76%.

To study the system model, the number of elderly population in each group is as follows:

Elderly population of 60~69 = 0.5389\* aging population

Elderly population of 70~79 = 0.2935\* aging population

Elderly population of over 80 = 0.1676\* aging population

	Population at the age of 60~69	the proportion of 60~69	Population at the age of 70~79	the proportion of 70~79	Population at the age of over 80	the proportion of over 80
Community 1	647	53.33%	381	31.41%	185	15.25%
Community 2	496	58.08%	240	28.10%	118	13.82%
Community 3	708	50.98%	437	31.46%	244	17.57%
Community 4	336	53.16%	167	26.42%	129	20.41%

(Data source: survey data)

## CONCLUSIONS

1. According to statistical data of the past five years and survey data of the elderly community, the proportion of elderly people in Wuhan can be concluded that the average is 16.07%.

2. Among the total population of the elderly, proportion at the age of 60~69 accounts for 53.89%, proportion at the age of 70~79 accounts for 29.35%, and the proportion of over 80 is 16.76%.

3. The system model of elderly population in each group is as follows: elderly population of 60~69 =0.5389\* aging population; elderly population of 70~79=0.2935\* aging population.

Elderly population of over 80 =0.1676\* aging population.

## ACKNOWLEDGEMENTS

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