Session 852, PAA2005 (Draft)

Estimates of the Poor Elderly Population in China

Xiaochun Qiao, Ph.D. and Professor
Institute of Population Research
Renmin University of China
Beijing, China

Kaiti Zhang and Lujun Sun
China Research Center on Aging
Beijing, China

Ling Zhang
Institute of Population Research
Renmin University of China
Beijing, China

There were 130 million, accounted for 9.9 %, elderly population aged 60 and over in China at the end of year 2000 based on the 2000 China Population Census. China's population is aging now (Qiao 1999), and the aging problem will be more and more serious in the first half of the 21st century due to fast fertility decline, lower economic development level, and the reform of socio-economic system which has led to loosening of the social security system (Qiao 2002). However, poor aged is the most vulnerable people, and poverty is the most serious problems among aging issues in China. Unfortunately we have never clearly known how many of the elderly people were poor even though Chinese economic situation has improved greatly since 1980s. The objective of this research is to estimate the number and the proportion of poor elderly in mainland China, as well as their characteristics.

Brief Review

Despite there were many researches focusing on population aging in China, the research on the poor elderly has seldom clearly been conducted before. China National Aging Working Committee (CNAWC) ever set up a research group on the investigation of urban-rural poor elderly in 2002 by conducting a survey. The CNAWC (2003) issued an official document requiring provincial aging committees to conduct the survey. However, as there were no consensus survey scheme, survey method, and questionnaire, the ways of collecting data, definition of the poor, and the information received were quite different among provinces; some provinces carried

out the survey through reporting from grassroots administrative organization, some by taking a sample survey, and some using typical survey. There were 24 (among 31) provinces from which the total number of poor elderly could be estimated, the others were excluded because of serious errors. However, there were only 19 provinces included in the general report in which the total number and the proportion of the poor elderly were estimated and only 12 provinces in which the poor elderly by rural and urban areas were calculated. Even though the survey defined the theoretical poverty line such as "hard to maintain basic living status," there was no operational definition given before the survey. Based on the limited data from the provinces of data available, without weighting, the final result is that there were 10.1 million of poor elderly in mainland China in 2002, 1.5 million in urban areas and 8.6 millions in rural areas. Above were the only result drawn from the "national survey". Because the survey was not nationally representative drawing from a sampling survey, the data from available provinces were highly selected or bias, and the surveys and definition of the poverty were not consistent among provinces, the result estimated is no longer reliable.

Using the National Urban-Rural sampling Survey of Elderly, Yu (2003) roughly estimated the number of poor elderly based on different definitions, and the results were 38.53 million by the method of Engel parameter (13.28 million for urban and 23.37[1] million for rural); 44.87 million by the International Standard of Poverty Line (12.64 million for urban and 32.22 million for rural), and 42.85 million by the method of Subjective Perception (9.32 million for urban and 33.54 million for rural). However, such results seemed incorrect. For the first estimation, the proportion of the poor elderly in urban areas (30%) was higher than that in rural areas (27%), which seemed impossible in current China. The other two results overestimated the amount of the poor elderly because the total number of the poor population in all ages in rural China was just 30 million based on the official publication. Yu's estimation for poor elderly in rural areas had been over 30 million. Of course, it is still possible that estimation of the 30 million for the poor population in rural areas might be underestimated.

Data and Methods

The data used for estimation is from the National Urban-Rural Sampling Survey of the Elderly conducted by China Research Center of Aging in November, 2000 and the 2000 national census on November 1st, 2000. The sampling survey covered 160 counties and cities in 20 provincial areas (among 31 provinces), with 20255 elderly aged 60 and over, 10171 in urban areas and 10084 in rural areas, which were drawn by equal number stratification. The primary sampling unit (PSU) was in provincial level. There were 1000 samples for each province, with half in urban and half in rural areas. Under provincial level, second sampling unit (SSU), the samples were randomly drawn in urban and rural areas, respectively. The data are nationally

[1] The summation of numbers of urban and rural elderly is not equal to the total at the published paper.

representative after weighted by the population distribution and age and sex structure of the national data of 2000 census. In matter of fact, we also weighted the data in provincial level in order to make comparison among provinces.

The objects of the survey focused on both individual and community so that the questionnaires divided into two, individual questionnaire and community questionnaire. Due to the different system between urban and rural areas, the individual questionnaire in urban areas also was a little bit of difference as the questionnaire in rural areas. The content of the questionnaire includes seven parts such as general situation of the elderly, economic support, medical and health care, community services, spiritual and culture activities, and grassroots organization and its work. The data used in this paper mostly deal with the information of economic support such as the income earned by the elderly and the income of elderly provided by their children and society.

Some Definitions

Poverty covers broader areas. In this paper, we focus the poverty on economic perspective, that is, the earning or income of individual rather than household. Before we estimate the number of the poor elderly, we have to define the EARNING of the elderly and the POVERTY.

There are three kinds of earnings of the current elderly, that is, 1) personal earnings, which include personal labor income, retirement income or pension, and insurance and interest earnings; 2) earnings from society, which include social, working unit, and community relief, and the income from the Lowest Living Security implemented in urban areas; 3) earnings from own children and relatives. In fact, there were few from relatives compared with children's support. As the old people's effective earnings were the sum of the three parts of the earnings, we use the sum of the earnings as the earnings of the elderly.

Even though there are many definitions for poverty, we tried three definitions of the poverty line or threshold. 1) Relative poverty line, which was defined by multiplying the average earnings of the community areas by 0.5. 2) Absolute poverty line, which was defined by different criteria in urban and rural areas separately. In urban areas, we used the Lowest Living Security Line (see Table 1), given by local government, which was different in different cities. In rural areas, we defined the poverty line by multiplying the Lowest Living Security line of the city[2] by 0.3. Because a huge diversity between urban and rural areas in China, we use 0.3 times[3] rather than 0.5

[2] In China, every rural area belongs to a city or a name of a city. The city includes both rural and urban areas. The definition of the poverty in rural areas referred to the definition of poverty of the urban areas, Lowest Living Security Line, in the same city.

[3] Based on the data from community questionnaire of the 2000 elderly survey, the average of the Lowest Living Security line among provinces was 158 Yuan RMB per month. The rural poverty line in China defined by the

times to define the absolute poverty line in rural areas. 3) Consuming poverty line, which was defined by the balance of the earnings and consuming. Once a person's expend was greater than his or her earnings in previous month of the survey, we take this person as the poor.

Table1. Lowest Living Security Line (LLSL) in Surveyed Provinces, 2000

Provincial areas	LLSL per month (Yuan RMB)
Beijing	273
Tianjin	240
Shanghai	278
Heilongjiang	151
Shannxi	127
Jilin	133
Jiangsu	95
Zhejiang	201
Hubei	81
Sichuan	126
Yunnan	133
Guangdong	219
Fujian	160
Jiangxi	115
Anhui	108
Hebei	173
Shandong	141
Henan	144
Gansu	125
Xinjiang	125
Total	158

Source: Community data of the 2000 elderly sampling survey

Preliminary Results Based on the Three Definitions

We found that the first definition led to very high amount of the poor (see table 2) and the proportions of the poor elderly were higher than 30% in almost all the provinces, with one exception of Tianjin. The highest proportion was found in Yunnan, accounted for 44%. The result based on the third definition showed relatively lower, lower than 20% in all provinces, and the lowest result occurred in Sichuan, accounted for 6.7%. However, the result of the absolute poverty line was moderate, with highest proportion in Yunnan (32.4%) and lowest proportion in Zhejiang and Xinjiang (9.7%).

central government was just above 625 Yuan RMB per year in 2000, equivalent to 52 Yuan RMB per month. The ratio of them between rural and urban areas approximates to 1:3.

Table 2 Provincial Proportions of Poor Elderly by Three Definitions（%）

Areas	Relative Poverty		Absolute Poverty		Consuming Poverty	
	Proportion (%)	S.E. (%)	Proportion (%)	S.E. (%)	Proportion (%)	S.E. (%)
Beijing	36.9	1.53	12.1	1.03	8.2	0.87
Tianjin	25.2	1.41	13.2	1.08	8.2	0.89
Shanghai	34.8	1.51	16.5	1.18	10.8	0.99
Heilongjiang	30.0	1.29	13.1	0.95	13.8	0.97
Shannxi	42.2	1.57	23.3	1.34	16.9	1.19
Jilin	40.3	1.40	11.6	0.91	11.8	0.92
Jiangsu	36.9	1.57	22.7	1.34	13.5	1.11
Zhejiang	36.9	1.56	9.7	0.96	8.7	0.91
Hubei	40.9	1.59	18.6	1.23	16.3	1.20
Sichuan	38.5	1.54	10.8	0.98	6.7	0.79
Yunnan	43.9	1.57	32.4	1.48	19.1	1.25
Guangdong	37.2	1.53	12.7	1.06	10.8	0.99
Fujian	40.0	1.57	10.1	0.97	9.3	0.93
Jiangxi	38.6	1.55	12.0	1.03	11.4	1.01
Anhui	42.2	1.57	18.9	1.25	14.2	1.11
Hebei	35.6	1.53	21.9	1.32	14.2	1.12
Shandong	41.7	1.57	28.4	1.44	15.5	1.16
Henan	37.3	1.54	14.8	1.13	9.8	0.95
Gansu	31.7	1.48	11.7	1.02	9.8	0.95
Xinjiang□	34.7	1.51	9.7	0.94	10.3	0.96

Source: calculated from the micro data of individual questionnaire of the 2000 elderly sampling survey

We also found that the results based on the second and the third definitions were highly correlated (0.847) with high significance based on Pearson correlation coefficient, while the result based on first two definitions and the result based on the first and the third definitions were less correlated with lower significance (see Table 3). Finally, we take the second definition as poverty for the estimation of the poor elderly at this research.

Table 3. Test of the Consensus of Three Definitions Based on Pearson Correlation Coefficient

	Relative : Absolute	Absolute : Consuming	Consuming : Relative
Correlation Coefficient	0.476	0.847	0.517
P-Value (Two-tale Test）	0.034	0.000	0.019

Source: Same as table 2.

Provincial Comparisons

China is huge and diverse, which means that the extent of the poverty in different provinces is quite distinguished. Based on the absolute poverty of Table 2, the highest poverty appeared in Yunnan province, 32.4%, Southwest, among the surveyed 20 provinces. The second one was Shandong, 28.4%, and the third one was Shannxi, 23.3%. However, the proportion of poverty of the elderly in some largest cities such as Beijing, Shanghai, Tianjin were not positioned at the lowest level. The reason is that even though we call this definition the absolute poverty line, it is not really absolute but relative to the provincial Lowest Living Security Line which was given by the local government. If we use one number of earnings per month as the threshold for all provinces, the results will be different. In fact, we can use less than 50, 150, and 250 Yuan RMB as the threshold of the earning of the elderly for all the provinces. Due to the income level or consuming level were different between urban and rural areas, we like to take the amount of less than 150 Yuan RMB as the poverty threshold for urban areas and 50 Yuan RMB as the poverty threshold for rural areas. Then, we have table 4 for urban and table 5 for rural.

For the monthly earnings of the elderly less than 150 in urban areas, the highest proportion appeared in Hubei province, accounted for almost one third. Yunnan ranked the second, accounted for 29%. In addition, the proportion of the elderly with lower income level in Shannxi, Anhui, and Jiangsu[4] provinces were also higher than 23%. At this time, the lowest proportion for the elderly whose monthly income were lower than 150 Yuan were shown up in Shanghai, Beijing, and Zhejiang, which belonged to the most developed areas in China. Henan, Tianjin, Fujian, and Guangdong had also lower proportion of the poor elderly, less than 10%. If we take the earning less than 50 as the most poverty in urban areas, Shannxi had the highest proportion and Tianjin had the lowest proportion.

[4] In general, Jiangsu should not belong to the lower income areas. However, the development in Jiangsu mainly focused on township and countryside enterprises so that the people in the urban areas were relatively poor.

Table 4. Proportion of Elderly in Urban Areas by Different Monthly Earnings and Provinces

Provinces	<=50		<=150 (Poverty threshold)		<=250		
	Prop. (%)	S.E. (%)	Prop. (%)	S.E. (%)	Prop. (%)	S.E. (%)	Case Number
Beijing	3.2	0.76	4.7	0.91	6.5	1.06	540
Tianjin	2.3	0.70	8.6	1.31	9.8	1.39	458
Shanghai	2.5	0.70	3.5	0.82	5.1	0.99	497
Heilongjiang	12.9	1.35	17.8	1.54	22.0	1.67	616
Shannxi	19.3	1.77	24.9	1.94	30.1	2.06	495
Jilin	11.3	1.31	15.8	1.51	20.7	1.68	581
Jiangsu	13.1	1.57	23.5	1.98	28.4	2.10	459
Zhejiang	2.6	0.72	4.7	0.95	7.0	1.15	493
Hubei	17.2	1.77	33.8	2.21	43.5	2.32	457
Sichuan	7.5	1.18	11.9	1.45	19.7	1.78	497
Yunnan	17.1	1.69	29.1	2.04	33.7	2.12	495
Guangdong	5.9	1.06	9.5	1.32	12.1	1.46	497
Fujian	5.2	1.00	9.4	1.32	11.8	1.46	489
Jiangxi	7.4	1.18	12.0	1.46	14.3	1.57	495
Anhui	16.2	1.66	23.8	1.91	30.0	2.06	495
Hebei	12.0	1.46	16.7	1.68	18.9	1.76	493
Shandong	12.7	1.51	19.0	1.78	24.7	1.95	487
Henan	5.4	1.02	8.5	1.26	10.3	1.37	492
Gansu	12.7	1.50	18.6	1.75	24.1	1.92	495
Xinjiang□	10.7	1.39	17.0	1.68	23.5	1.90	498

Source: Same as Table 2

For the situation in rural areas, if we defined the poverty threshold less than 50 Yuan a month, among the 20 provinces, Yunnan had the highest poverty proportion, accounted for 36.2%. The next one was Shandong and Shannxi, over one third of the elderly living under the poverty line. Following was Henan and Hebei, 26.8%. The lowest proportion of poor elderly in rural areas was shown in Xinjiang (7.1%), Fujian (10.4%), and Heilongjiang (11.4%).

Table 5. Proportion of Elderly in Rural Areas by Different Monthly Earnings and Provinces

Provinces	<=50 (Poverty Threshold)		<=150		<=250		Case Number
	Prop. (%)	S.E. (%)	Prop. (%)	S.E. (%)	Prop. (%)	S.E. (%)	
Beijing	12.9	1.57	25.6	2.04	37.5	2.26	457
Tianjin	13.5	1.55	29.8	2.08	42.8	2.25	484
Shanghai	20.0	1.81	39.9	2.21	51.6	2.26	490
Heilongjiang	11.4	1.24	39.2	1.91	61.4	1.91	652
Shannxi	33.5	2.12	63.1	2.17	78.4	1.85	494
Jilin	13.9	1.36	36.9	1.89	51.8	1.96	651
Jiangsu	22.4	1.90	48.5	2.28	66.1	2.16	481
Zhejiang	13.3	1.59	34.9	2.23	52.0	2.33	458
Hubei	17.9	1.73	48.0	2.25	65.0	2.15	491
Sichuan	14.8	1.59	41.4	2.21	58.7	2.21	498
Yunnan	36.2	2.16	77.2	1.89	86.8	1.52	495
Guangdong	12.8	1.50	31.8	2.10	48.4	2.25	493
Fujian	10.4	1.39	28.0	2.05	40.6	2.24	479
Jiangxi	21.5	1.86	51.7	2.26	66.4	2.14	487
Anhui	21.9	1.88	55.8	2.26	69.9	2.09	482
Hebei	26.8	2.02	54.6	2.27	71.4	2.06	479
Shandong	34.0	2.14	68.3	2.11	82.3	1.73	488
Henan	26.7	2.00	63.3	2.18	78.3	1.86	491
Gansu	12.1	1.48	57.3	2.25	76.1	1.94	484
Xinjiang□	7.1	1.15	21.1	1.82	32.9	2.10	500

Source: Same as Table 2.

Estimates of the Poor Elderly in China

We have compared the proportions of the poor elderly among provinces. However, we do not exactly know how many poor elderly and how about the proportion of the poor elderly in whole China. First, we have to calculate the proportions of poor elderly in urban and rural areas separately by weighting the provincial distribution of the elderly in 2000 population census. Second, based on the census data, we got the number and the proportion of elderly aged 60 and over in urban and rural areas. Finally, based on the proportion of the elderly in urban and rural areas in census, we can estimate the total number and the proportion of the poor elderly in whole China at the reference time of 2000 population census, that is, November 1st, 2000.

The estimated results were that there were 129978 thousand old people aged 60 and over in China at November 1, 2000. Among them, there were 4441 thousand, accounted for 34.2%, in urban areas and 8557 thousand, accounted for 65.8%, in rural areas. Of the urban elderly, 15.0%（SE=0.354%, 95%CI={15.0±0.69}%） were poor, while

of the rural elderly, 18.8%（SE=0.389%, 95%CI={18.8±0.76}%）were poor. Weighted by urban-rural elderly proportion, we got the proportion of the poor elderly in the whole country, which was 17.5% (SE=0.267%, 95%CI= {17.5±0.52} %), and its number is 22.75 million.

Demographic Characteristics of Poverty of the Elderly

It is not just enough to get the total number and the proportion of the poor elderly. In addition, we should estimate the proportions of poor elderly by some characteristics such as age and sex, nationality, educational status, and marital status, etc.

We calculated the proportion of the poor elderly by age and sex (see Table 6). First, we take look of the urban situation. Even though the proportion of poor elderly in urban areas accounted for only 15%, the difference of the proportions between male and female was quite large. There were only 6.3% of poor elderly for male, which meant that majority of men in urban areas was not poor. However, the proportion of poor elderly for female accounted for 23.4%, nearly one fourth, quite higher than that for male. This reflected the disparity in poverty between men and women in urban areas. If we considered the proportions in rural areas, we found that the difference of the proportion of the poor elderly between male and female in rural areas was not as big as that in urban areas. Their proportions were 17.1% for male and 20.4% for female. In matter of fact, we could not compare the proportions between urban and rural areas because the definitions of the poverty between urban and rural areas were different. So we could not conclude that the proportion of poor elderly for female in urban areas was higher than that in rural areas.

Table 6. Proportion of the Poor Elderly by Age and Sex（%）

Age group	Urban			Rural		
	Male	Female	Both	Male	Female	Both
60-64	5.4	17.5	11.3	14.6	18.6	16.4
65-69	4.7	19.4	12.2	18.0	20.3	19.1
70-74	6.6	24.5	15.4	17.7	21.6	19.8
75-79	9.9	33.3	22.6	17.7	20.3	19.2
80-84	11.9	38.0	27.7	19.5	19.7	19.6
85-89	10.0	40.8	30.8	23.5	22.5	22.8
90+	10.0	43.6	29.1	20.6	35.7	31.6
Total	6.3	23.4	15.0	17.1	20.4	18.8

Source: Same as Table 2.

Considered the disparity among ages, we found that, in general, trend of the proportion of the poor elderly increased following the increase of age with a little fluctuation in both urban and rural areas. For the urban areas, a sharp increase

occurred in age 75-79 and 80-84. There were minor changes in the proportion before and after those ages. Such turning points could be found at age 85-89 in rural areas. Compared with the increase of the proportions of the poor elderly for female, the proportions for male reflected more fluctuation, which meant that the effect of age on poverty was stronger for women than for men.

Chinese minority has its own features. Minority people usually reside in remote and less developed areas. They have different style of labor working, living habit, convention, and culture as Han, the majority. From the perspective of poverty, even though there was difference in poverty of the elderly between minority and Han, the proportion of poor elderly in urban areas was sharp, but little higher for minority than for Han nationality (see Table 7). However, in rural areas, the difference in the proportion was highly significant between minority and Han, 31% for Minority and 18% for Han nationality, the Majority. This meant that the inequality in poverty of the elderly mainly occurred in rural areas, rather than in urban areas.

Table 7. Proportion of Poor Elderly By Majority and Minority（%）

Nationality	Urban	Rural
Han(Majority)	14.9	17.9
Minority	16.5	30.9
Total	15.0	18.8

Source: Same as Table 2

In fact, whether the elderly were educated reflected a strong impact on poverty (see Table 8), the higher the elderly were educated, the lower the proportion of the poor. For instance, there were 32% of never-educated elderly who were living under the poverty line in urban areas, while the proportion of such poor elderly was 22.3% who were in poverty state in rural areas. However, the effect of education on poverty of elderly in rural areas was not as significant as the effect in urban areas.

Table 8. Proportion of Poor Elderly By Education（%）

Education Status	Urban	Rural
Never Educated	31.8	22.3
Private Education	20.9	15.7
Primary School	13.0	13.9
Middle School	5.1	10.1
High School	2.8	4.5
Collage above	0.5	2.0
Total	15.0	18.8

Source: Same as Table 2.

Poverty of the elderly also had strong relation with marital status of the elderly (see Table 9). The highest proportion of the poor elderly appeared in the category of Never Married, 37.1% in urban areas and 44.2% in rural areas. The lowest proportion of the poor elderly was in married state with cohabitation, that is, 10.5% in urban areas and 16.3% in rural areas. Even though we can find the relation between the poverty of the elderly and the marital status, it is unable to know the causal relation, that is, which one is the effect factor or effected. The most possible result is that poverty might lead to unmarried or separated or divorce or even death of spouses. However, it is hard to say that the elderly out of marriage, separated, or divorce caused the poverty. Such cause-effect relation should be further explored.

Table 9. Proportion of Poor Elderly By Marital Status (%)

Marital Status	Urban	Rural
Cohabitation	10.5	16.3
Separated	19.2	31.9
Widow	24.2	20.1
Divorced	14.5	36.7
Never Married	37.1	44.2
Total	15.0	18.8

Source: Same as Table 2

The Poverty of Elderly by Retirement Status

Working systems between urban and rural areas are quite different in China, which was followed by previous planned economy. In urban areas, almost all the adult, if needed, were assigned a working post in an enterprise or other institutions by the government so that there was no unemployment before. Once they retired, their working units had the obligation to provide them retirement income; now we call it pension. In contrast, people in rural areas had to be working in family dealing with agriculture work. When they got old and were unable to work, they had no retirement income or pension. As the system are different between urban and areas, we have to consider the urban and rural situation separately.

Elderly in urban areas

Current elderly have experienced the times of the planned economy when they were working. From last column of the table 11, you can see that there were 73% of the elderly aged 60 and over in urban areas who were retired. One percent of the elderly were still working. Nearly 22% of them had never worked[5], which meant that they had no pension provided by their original working units or the government. When we

[5] This proportion was little bit higher than the reality because some of them did not belong to urban citizen or without urban household license when they were in working age; and they were living in urban areas at the time of the survey due to the territory change from rural to urban or floating from rural to urban.

compare the distribution of poverty column with that of the non-poverty column, the result was very clear, that is, the never-worked elderly were more likely to be poor and the retired elderly were more likely to be separated from the poverty.

Table11. Distribution of the Elderly by Retirement Status and Poverty Status in Urban Areas（%）

Retirement Status	Non-poverty	Poverty	Total
Honor Retirement	7.0	0.2	6.0
Retirement	77.0	7.8	66.9
Still working	0.8	1.6	0.9
Never worked	12.5	76.2	21.8
Others	2.7	14.3	4.4
Total	100.0	100.0	100.0

Source: Same as Table 2.

However, what kinds of elderly are more likely to be poor? From the table 12, we can see that the elderly who had never worked had highest proportion to be poor, that is, 51.1%. Elderly with honor retirement had lowest risk to be poor. There were 1.7% of the elderly in retirement state who were in poverty status. To the elderly who were still working, 27% of them were poor. This might mean that some poor elderly had to work in order to compensate the absence of the earnings. It is very clear that with or without working before is the key to be likely to become poor.

Table 12. Proportion of the Poverty of Elderly by Retirement Status in Urban Areas（%）

Retirement Status	Non-poverty	Poverty	Total
Honor Retirement	99.6	0.4	100.0
Retirement	98.3	1.7	100.0
Still working	73.4	26.6	100.0
Never worked	48.9	51.1	100.0
Others	52.5	47.5	100.0
Total	85.4	14.6	100.0

Source: Same as Table 2.

Even though we found that the elderly who worked in an institution before and had retirement income at the time of the survey showed lower risk at poverty, the nature of their previous working institution still had something to do with the poverty of the elderly. Table 13 tells the differences. There was no poverty shown for the elderly who were working in outside-supported enterprise. The lowest proportion of the poor elderly appeared at the government unit, social affaire unit, and the state-owned enterprise. The elderly who worked at Stoke-owned enterprises were more likely to be poor, accounted for 11.5%, and the elderly who worked at collective enterprise before had 4.8% of them becoming poor. From this, we can see the extent to which the elderly were secured in different institutions where they worked before in urban China.

Table 13. Proportion of Poor Elderly Who Worked before by Nature of the Work Unit（%）

Government unit	1.0
Social affair unit	0.8
State-owned enterprise	0.8
Collective enterprise	4.8
Outside-supported enterprise	0.0
Private-owned enterprise	1.4
Stoke-owned enterprise	11.5
Others	13.7
Total	1.9

Source: Same as Table 2.

Elderly in rural areas

In rural areas, poverty of the current elderly was mainly determined by the previous working experience of the elderly. As the survey did not tackle the previous experiences of the sampled elderly, we could not analyze causes of the poverty of the elderly in rural areas. However, some elderly in rural areas were still working and some were not working, and we can see if there was difference in poverty between working and non-working elderly. Table 14 showed that there was no significant difference in the proportion of poverty between the working and non-working elderly. So we could not conclude that the elderly in rural areas who were still working was due to poverty.

Table 14. Proportion of the Poor Elderly by Working Status in Rural Areas（%）

Working Status	Non-Poverty	Poverty
Not working	81.2	18.8
Working	80.9	19.1
Total	81.1	18.9

Source: Same as Table 2.

The Poverty of Elderly and Economic Status

In general, expense of elderly should be positive correlated with their earnings. Table 15 showed the proportion of the poor elderly categorized by the level of consumption. The general trend was that the lower the consumption of the elderly, the higher the proportion of the poor elderly. The elderly whose monthly consumption was less than 25 Yuan RMB took highest proportion of the poverty, 22.4% in urban and 24.2% in rural areas. This also reflected that over 70% of the elderly, whose monthly consumption was less than 25 Yuan, were not poor. In other word, even though some elderly received higher earning, they did not want to spend a lot for consumption but saved it. If monthly consumption of the elderly was greater than 200 Yuan, they had

lower proportion to be poor. Because the consumption asked at the survey only delimited the month prior to the time of survey, it would be a special situation that what they spent was much higher than what they earned in the month.

Table 15. Proportion of Poor Elderly by Monthly Expenditure（%）

Monthly Expenditure	Urban	Rural
0-25	22.4	24.2
26-50	16.9	16.7
51-75	16.3	13.0
76-100	14.1	13.4
101-150	13.0	11.5
151-200	10.0	10.8
201-300	6.7	6.8
301+	4.0	9.1
合计	15.0	18.8

Source: Same as Table 2.

At the 2000 sample survey, they asked a question to the respondents: “Do you perceive that you are economically secured?” Even though some elderly responded “yes or feeling secured”, there were still 7.8% of the elderly in urban areas and 14.1% in rural areas who were living under the poverty threshold (see Table 16). However, to the elderly who answered “not secured”, 35% of them in urban areas and 24.4% in rural areas were poor. If we test the extent of the correlation between poverty and self-rated security by urban and rural areas, respectively, we found that such correlation appeared stronger in urban areas than in rural areas.

Table 16. Proportion of Poor Elderly by Self-rated Security（%）

Economically secured	Urban areas	Rural areas
Not secured	35.0	24.4
Secured	7.8	14.1
Total	14.9	18.7

Source: Same as Table 2.

Above, we have defined the “poverty” by the real monthly earnings or income of the elderly. Such definition can be attributed to objective method. We found from Table 16 and Table 17 that the objective poverty sometimes was not consistent with the levels of real live and economic security. This means that objective poverty may or may not be considered as poverty or subjective poverty. Self-rated poverty might be more meaningful. The survey also asked a question like: “how do you rate your current economic status?” There were four choices: good enough, just enough, some difficulties, and very difficult. If we take “very difficult” as the subjective poverty line, we can give the proportion of poverty of the elderly based on the subjective poverty.

Table 18 showed the distribution of the self-rated economic status of the elderly by urban and rural areas and by poverty or non-poverty. In urban areas, there were 4.4% of elderly feeling "very difficult", while there were 8.3% of them feeling "very difficult" in rural areas. If we took these results as the proportion of poverty, the extent of the poverty would be quite lower than the calculated absolute poverty (15.0% in urban and 18.8% in rural areas). The situation in urban areas were quite better than that in rural areas because 78% of the elderly in urban areas rated their economic status as "good enough" and "just enough", and such proportion in rural areas was only accounted for 59%. If we considered the poor elderly in both urban and rural areas, the proportions of the "very difficult" were higher, 13.8% in urban and 18.4% in rural areas, compared to the proportion of the "very difficult" for non-poor elderly in both urban and rural areas. It is very clear that poor elderly were more likely to be economically difficult.

Table 18. Distribution of Elderly by Self-rated Economic Status and Urban and rural areas (%)

Economic Status	Urban			Rural		
	Non-poverty	Poverty	Total	Non-poverty	Poverty	Total
Good enough	24.3	6.5	21.6	11.5	4.2	10.1
Just enough	58.4	46.9	56.7	52.4	35.4	49.3
Some difficulty	14.5	32.8	17.3	30.2	42.0	32.4
Very difficult	2.7	13.8	4.4	6.0	18.4	8.3

Source: Same as Table 2.

Now, based on the table 19, we can test the consistency between the objective poverty and subjective poverty. There were 46.9% in urban and 41.5% in rural areas of elderly who perceived "very difficult" in their lives. The overlap between objective and subjective poverty accounted for less 50%. Even for the elderly who rated "good enough", 4.5% of them in urban and 7.8% in rural were poor.

Table 19. Proportion of Poor Elderly by Economic Status（%）

Economic Status	Urban	Rural
Good enough	4.5	7.8
Just enough	12.3	13.5
Some difficulty	28.4	24.3
Very difficult	46.9	41.5
Total	14.9	18.7

Source: Same as Table 2.

Poverty of Elderly and Happiness or Satisfactions

Poverty can caused not only economical difficulties in ordinary lives but also the inharmoniousness in family of the elderly and unhappiness of the elderly. Table 20

told us that the proportion of inharmonious family of the elderly accounted for only 1.2% in urban areas and 5.6% in rural areas. The proportion in rural areas was much higher than that in urban areas. Whether was such inharmoniousness triggered by economic situation of the elderly or their family? Once they were poor, the proportion of inharmonious family of the elderly increased to 2.5% in urban areas and 7.3% in rural areas.

Table 20. The Proportion of Inharmonious Family of the Elderly（%）

	Non-poverty	Poverty	Total
Urban	1.0	2.5	1.2
Rural	5.2	7.3	5.6

Source: Same as Table 2

In matter of fact, we can test the proportion of poor elderly in harmonious family or inharmonious family of the elderly. Table 21 showed the results. It is clear that the proportions of poor elderly in inharmonious family were quite higher than those in harmonious family in both urban and rural areas. In fact, we could not test if the inharmoniousness determined the poverty or the poverty determined the inharmoniousness, but their relation existed and was strong.

Table 21. Proportion of Poor Elderly by Family Harmoniousness（%）

	Urban	Rural
Inharmoniousness	30.0	24.2
Harmoniousness	14.6	18.1
Total	14.8	18.4

Source: Same as table 2.

In China, in general, the elderly felt happy. A question was asked to the elderly: “Compared to other elderly, do you think that you are happy?” There were three choices: happy, almost same, and unhappy. Table 22 showed the proportions responding happy and unhappy (“almost same” was not showed).

Table 22. The Proportion of Elderly Responding Happy and Unhappy (%)

		Non-poverty	Poverty	Total
Urban	Happy	66.3	48.8	63.7
	Unhappy	4.3	13.0	5.6
Rural	Happy	45.9	30.0	42.9
	Unhappy	8.9	18.0	10.6

Source: Same as Table 2.

There were 63.7% of elderly who thought that they were happy in urban areas. Such proportion in rural areas was just 42.9%. There were 5.6% of elderly in urban areas who felt unhappy. The situation in rural areas was worse than that in urban because

10.6% of elderly in rural areas feeling unhappy. If we decomposed the elderly into poverty and non-poverty, it was obvious that the elderly in poverty state showed lower proportion of happiness and much higher proportion of unhappiness than the elderly in non-poverty state in both urban and rural areas.

Table 23. Proportion of Poor Elderly by Happiness State（%）

	Urban	Rural
Happy	11.5	13.1
Almost Same	18.6	20.9
Unhappy	34.5	31.7
Total	15.0	18.7

Source: Same as Table 2.

If we calculated the proportion of poor elderly based on the classification of happiness state of the elderly, the situation will be much clearer (see Table 23). Under the unhappy state, there were 34.5% and 31.7% of the elderly who were poor in urban and rural areas, respectively. However, under the happy state, such proportions were only 11.5% and 13.1% in urban and rural areas. This meant that poverty of elderly made strong impact on the happiness of the elderly.

Similar to happiness, the satisfaction to their lives of the elderly was also relevant to the poverty. Table 24 showed the proportion of poor elderly under different extent of satisfaction to the lives. In general, the less satisfaction to lives, the more likely the poverty occurred. Such situation was more obvious in rural areas than in urban areas.

Table 24. Proportion of Poor Elderly by Satisfaction to Lives（%）

	Urban	Rural
Very dissatisfied	21.1	27.4
Dissatisfied	26.9	26.9
So so	18.9	22.7
Satisfied	13.0	15.5
Very Satisfied	10.8	13.6
Total	15.0	18.7

Source: Same as Table 2.

Poverty of Elderly and Their Health

Health has strong relation with poverty of elderly. However, health problem may lead to poverty. Oppositely, poverty of the elderly may cause unhealthy. Even thought their impact might be mutual, their correlation relation is clear.

In 2000 survey, the respondents answered a question dealing with self-rated health, that is, “how do you assess your health condition?” The possible choices included: very bad, bad, so-so, Good, and very good. Table 23 showed the proportion of poor elderly by the perceived health status. The general trend was that the healthier the elderly, the lower the proportion of poor elderly. It seemed curious that the highest proportion of the poverty appeared at the group “Bad” rather than “Very Bad” and the lowest proportion of the poverty appeared at the group “Good” rather than “Very Good” in both urban and rural areas. Such fluctuation reflected that health was not the only factor leading to poverty of the elderly.

Table 23 showed the proportion of poor elderly by the perceived health status（%）

	Urban	Rural
Very Bad	20.1	21.4
Bad	20.4	23.1
So-so	14.2	18.6
Good	12.2	14.5
Very Good	12.9	15.4
Total	15.0	18.7

Source: Same as Table 2.

Self-rated health could be a kind of disparity to the real health status. Some elderly needed to be cared for their ordinary lives. Such elderly were a sort of disability, which was more objective in assessing the health status of the respondents. Table 24 gave the proportion of poor elderly by the need to be cared and not to be cared. It was clear that the proportions of the poor elderly for need to be cared were higher, 18% in urban and 27% in rural areas, than those not need to be cared, 14.7% in urban and 18.2% in rural areas. From the results we can see that health really matters in poverty of the elderly.

Table 24. Proportion of Poor Elderly by the Need to be Cared（%）

Need to be Cared	Urban	Rural
Not need	14.7	18.2
Need	18.0	27.0
Total	14.9	18.8

Source: Same as Table 2.

Conclusion

This paper has estimated the number and the proportion of the poor elderly in mainland China based on the data of 2000 sample survey of the elderly and the data of 2000 population census. In addition, we described the characteristics of the poor elderly by urban and rural areas, demographic, retirement, economic, happiness, and health status. It showed that the elderly in rural areas, higher ages, minority nationality,

lower education, unhappier status, and unhealthy status were more likely to be poor. We did not conduct multivariate analysis and causal analysis in order to explain the causes of the poverty of the elderly in this paper. In matter of fact, it would not be sufficient to explore the causes of the poverty of the elderly just based on the cross-sectional data. Longitudinal data are really needed. We are now planning to conduct a national follow-up survey at the end of this year in order to make the issue more clear and give more explanation on the causes of the poverty of the Chinese elderly.

Reference:

Carr, Dara (2004): "Improving the Health of the World's Poorest People", Health Bulletin, Population Reference Bureau

China National Aging Working Committee (CNAWC) (2003). General Report on Research Program of National Urban-Rural Poverty of the Elderly (not published yet), December 2003.

He Changmei, Xiaochun Qiao (1999). Adolescents of Yesterday and Adolescents of Today with Life Course Perspective: A Research Report of China National Committee on Aging. Population Research. (Chinese); 23(5)

Qiao, Xiaochun (2004). China's Aging and Social Security of the Elderly: With Reference to Japan's Experiences, Visiting Research Fellow Series, Institute of Developing Economies, Japan External Trade Organizations, No. 388, March (Japan)

Qiao, Xiaochun (2002). Analysis on the Problems of the Quality of Data of China's 2000 Census, Journal of Population Science of China (Chinese), 2002(4)

Qiao, Xiaochun and Chirayath Suchindran (2002). The Elderly in China: The Impact of Population and Social Characteristics on Health and Happiness. BOLD, Quarterly Journal of International Institute on Ageing (United Nations – Malta); November, Vol. 13: p.18-24

Qiao, Xiaochun (2001). From Decline of Fertility to Transition of Age Structure: Ageing and Its Policy Implication in China. GENUS, Volume LVII, No. 1, January-March, p.57-81. (Italy)

Qiao, Xiaochun (2000). The Estimate of the Coming Problems of Support and the Care of the Elderly in Rural China. Population and Market Analysis (Chinese), 2000 (3)

Qiao, Xiaochun, Wei Chen(1999). Trends of Aging in the early of 21st Century in China; 23(6) (Chinese)

Qiao, Xiaochun (1999). Policy Suggestion on the Settlement of China Aging Issues in the 21st Century. Aging China, Supplement of the Journal of Population Research; P63-70 (Chinese)

Xuejun Yu (2003). Research on the Poverty of the Aged Population. Data Analysis on the Sampling Survey of the Aged Population in Urban-Rural China. China Biaozhun Publishing House.