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Analysis on the Care Modes of the Disabled Elderly in China

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Abstract: China has entered a period of accelerated population aging that is accomplished by an increasing prevalence of the number of the disabled elderly. This paper uses the latest data from the CLHLS of 2018 to report that the demographic characteristics and care modes of the disabled elderly in China. We find that the function of family care is declining, community care needs to be improved, and institutional care is becoming increasingly difficult. Furthermore, we put forward some effective suggestions to solve the problems.

1. Introduction

The aging of population is an inevitable outcome of economic and social development, and is also a major issue faced by human society in the 21st century. China has entered the stage of rapid population aging [1]. According to National Bureau of Statistics, by the end of 2021, China's elderly people aged 60 and above had reached 267 million, accounting for 18.9% of the total population. From the perspective of life cycle, with the increase of the age of the elderly, the physical functions continuously decline and the disease probability sharply rise. According to the forecast, there are more than 40 million disabled and semi-disabled elderly in China, and it is estimated that the number of disabled elderly will reach 91.4 million by 2050 [2]. Under the background of smaller family size and population structure with fewer children in China, it is important to discuss the care modes of the disabled elderly. So we use the data from the Chinese Longitudinal Healthy Longevity Survey (CLHLS) in 2018 to analyze the care modes of the disabled elderly. Based on the statistical analysis, we put forward corresponding suggestions to solve existing problems.

2. Relevant Materials

2.1. Data

The CLHLS took a long time. Its baseline survey was launched in 1998 and had conducted eight surveys in 23 provinces, municipalities and autonomous regions by 2018. The survey covered 113 thousand people, finding that respondents over 80 years old accounted for 67.4% of the total sample. The quality of CLHLS data has been shown to be high by peer experts at home and abroad after a comprehensive evaluation [3] . Therefore, the data we used in this paper are mainly derived from the CLHLS data in 2018, including 15,874 samples of the elderly aged 60 years and over in which 4,187 disabled elderly people accounting for 26.38% of samples are included.

2.2. ADL Disability

The disabled elderly known as the elderly who lose the ability to live independently have functional disability and can't take care of themselves due to age, disease, disability and so on. Physical functional is assessed using the Katz Index of Activities of Daily Living (ADL) which has measured the disability degree for a long time in this paper [4]. The CLHLS collects data on the following six activities: (1) feeding, (2) dressing, (3) getting on and of the bed, (4) toileting, (5) bathing, and (6) continence. Expressly, each item has three response categories: "able to do without help", "need some help", and "need full help". Individuals are asked if she or he has any difficulties with each of the activities. If the elderly report needing any help in any item, we classify these respondents as ADL disable, otherwise we consider them as not ADL disable. Overall, ADL impairment is defined as inability to perform one or more activities.

Besides, the disabled degrees are divided into mild disability which is defined that the elderly have limitation in one activity or two activities, moderate disability which is defined that the elderly have limitation in three or four activities, and severe disability which is defined that the elderly have limitation in five or six activities. On the basis of the information, a total ADL score is calculated according to the answer of the elderly.

3. Major Findings: Distribution of the Disability Degree

The number of the disabled elderly not only relates to the total amount of elderly people, but also depends on demographic characteristics which mainly contain age, gender, town and country, marriage and education level [5]. All analyses in this paper are classified by age (60-69, 70-79, 80-89, 90-99, 100+), gender (man and woman), and rural/urban residence.

3.1. Distribution of the Disabled Elderly According to Different Age

Table 1 indicates disability degree for the sample population broken into subgroups defined by factors such as age, gender and living situation. The physical function gradually weakens with age, resulting that the disability rate ceaselessly increases especially after the age of 80. In order to better analyse, age groups are classified into five categories: 60-69, 70-79, 80-89, 90-99, and 100 and above [6].

The young-old respondents have better physical function. In 60-69 age group, the proportions of mild, moderate and severe disability are 1.84%, 0.49% and 0.67% respectively. In 70-79 age group, the proportions of mild, moderate and severe disability are 3.66%, 1.05% and 1.20% respectively.

The disability proportions increase rather sharply in the oldest-old groups. In 80-89 age group, the proportions of mild, moderate and severe disability are 10.44%, 2.97% and 3.50% respectively. In 90-99 age group, the proportions of mild, moderate and severe disability are 20.18%, 8.76% and 10.85% respectively. In 100 and above age group, the proportions of mild, moderate and severe disability are 24.40%, 14.91% and 24.19% respectively, which indicates worse physical functional among the elderly more than 100 years old. Obviously, we can know the disability degree will become more worse along with the growth of the age.

3.2. Distribution of the Disabled Elderly According to Different Gender

Regarding gender cohorts (Table 1), the proportions of disability in women are higher than those in men. The proportions of mild, moderate and severe disability in men are 10.38%, 4.32% and 5.16% respectively, while the proportions of mild, moderate and severe disability in women are 14.36%, 6.78% and 10.28% respectively. We can find the proportion of severe disability in women is almost

twice as high as that in men, indicating that the disability proportions between men and women are seriously unequal.

3.3. Distribution of the Disabled Elderly According to Different Living Situation

Generally speaking, the elderly in urban areas enjoy more perfect social security service, richer medical resources and pay more attention to do some physical exercise, thus the proportion of the disabled elderly in urban areas is less likely to higher than that in rural areas. As Table 1 showed, however, in the urban group, the proportions of mild, moderate and severe disability are 14.09%, 6.85% and 10.71% respectively, while in the rural group the proportions of mild, moderate and severe disability are 12.17%, 5.32% and 7.08% respectively. In terms of disability degree, we find respondents living in rural and urban areas have obvious differences in proportions, with urban respondents having higher rates. It is resulted from sample selection bias.

From the perspective of demographic characteristics, there are significant differences in distributions of different disability degree by age, gender, living situation groups. We find that the disabled elderly tend to be advanced age, the disability proportion of elderly women is higher than that of elderly men and there is a gap of disability proportion between town and country.

Table 1: Distributions of Different Disability Degree by Age, Gender, Living Situation Groups (%)

Disability Degree		Mild Disability	Moderate Disability	Severe Disability
Age Groups	60-69	1.84	0.49	0.67
	70-79	3.66	1.05	1.20
	80-89	10.44	2.97	3.50
	90-99	20.18	8.76	10.85
	100+	24.40	14.91	24.19
Gender Groups	Man	10.38	4.32	5.16
	Woman	14.36	6.78	10.28
Living Situation Groups	Town	14.09	6.85	10.71
	Country	12.17	5.32	7.08

Note: According to Chinese Longitudinal Healthy Longevity Survey (CLHLS) of the Peking University in 2018, the authors calculate with the statistical software of SPSS26.0.

4. Present Situations of the Care Modes

On the basis of relevant researches, we divide the care modes into family care and socialized care [7]. Family care refers to the way in which the disabled elderly living at home are taken care of by family members, neighbors or maids, while socialized care is defined as other subjects which mainly refers to institutions and communities provide care service.

4.1. Family Care

4.1.1. Care Subjects

Table 2 indicates the distribution of care subjects by age, gender and living situation groups. The data shows that family members plays the most important role in care subjects. Specifically, in the 60-69 age group, the disabled elderly are mainly taken care of by spouses, children and grandchildren, accounting for 63.4%, 19.5% and 2.4% respectively. In other words, the care subjects from families account for 85.3%. It can be seen that the care subjects from families in the 70-79, 80-89, 90-99, 100 and over age group account for 78.7%, 82.3%, 83.6% and 86% respectively.

In terms of gender, women get more care help from family members than men. 4.2% of the care subjects of the elderly women are from their spouses; 76.8% of the care subjects of the elderly women are from their children; 4.6% of the care subjects of the elderly women are from their grandchildren. In other words, the care subjects from families account for 85.3%, a proportion that is 3.2% higher than the percentage for men.

Respondents living in town have somewhat less family care than their rural counterparts. In town group, the disabled elderly are mainly taken care of by spouses, children and grandchildren, accounting for 8.9%, 56.4% and 2.6% respectively. In other words, the care subjects from families account for 67.9%, and this proportion is 24.6% lower than the proportion in country.

According to the above analysis, we find that the care subjects of the disabled elderly mainly came from families. This is mainly because the system of socialized care isn't perfect, making family members have to undertake more responsibilities.

Table 2: Distributions of Care Subjects by Age, Gender, Living Situation Groups(%)

Main Caregivers		Spouse	Children	Grandchildren	Neighbors	Institutions	Maids	Self-care
Age Groups	60-69	63.4	19.5	2.4	2.4	2.4	9.8	0
	70-79	43.6	33.5	1.6	0	4.8	13.3	3.2
	80-89	22.6	57.8	1.9	1.2	5.1	8.9	2.5
	90-99	5.7	75.6	2.3	0.9	4.3	10	1.2
	100+	1.3	79	5.7	1.5	2.3	9.6	0.6
Gender Groups	Man	18.4	61.3	2.4	1.7	3.8	10.9	1.5
	Woman	4.2	76.8	4.3	1	3.4	9.3	1.1
Town and Country Groups	Town	8.9	56.4	2.6	1.1	7.1	22.8	1.1
	Country	8.8	79.5	4.2	1.2	1.7	3.3	1.3

Note: According to Chinese Longitudinal Healthy Longevity Survey (CLHLS) of the Peking University in 2018, the author calculate with the statistical software of SPSS26.0.

4.1.2. Care Costs

Table 3 presents the distribution of care costs by age, gender and living situation groups. 50% of the care costs of disabled elderly aged 60-69 are from their children; 55.3% of the care costs of disabled elderly aged 70-79 are from their children; 57.9% of the care costs of disabled elderly aged 80-89 are from their children; 72.8% of the care costs of disabled elderly aged 90-99 are from their children; 77.55% of the care costs of disabled elderly aged 100 and above are from their children. It means that the care costs of the disabled elderly gradually depend on their children as they grow older [8].

In terms of gender group, 78% of the care costs of the elderly women are from their children, while 58.1% of the care costs of the elderly men are from their children.

Facing expensive care costs, respondents with no pensions have to rely more on their children than those with pensions. 51.4% of the care costs of the disabled elderly living in town are from their children, while 82.4% of the care costs of the disabled elderly living in country are from their children.

According to the above analysis, we find children undertake the main long-term care costs in disabled family, but care costs from the government are not high in any group. So it is clear that the source of care costs is relatively single.

Table 3: Distributions of Care Costs by Age, Gender, Living Situation Groups (%)

Source of Care Costs		Own and spouse	children	government	others
Age Groups	60-69	31.6	50	5.3	13.1
	70-79	38.8	55.3	3.9	2
	80-89	33.7	57.9	2.7	5.7
	90-99	21.9	72.8	0.9	4.4
	100+	13.9	77.5	3.5	5.1
Gender Groups	Man	33	58.1	3	5.9
	Woman	15.1	78	2.3	4.6
Living Situation Groups	Town	41.6	51.4	2.4	4.6
	Country	10.0	82.4	2.6	5

Note: According to Chinese Longitudinal Healthy Longevity Survey (CLHLS) of the Peking University in 2018, the author calculate with the statistical software of SPSS26.0.

4.1.3. Care Time

As Table 4 shows, with the growth of age, the care time that the disabled elderly obtaining from all care subjects gradually decreases. Among the disabled elderly aged 60-69, 81.8% of them obtain 1-36 hours of care time. Among the disabled elderly aged 70-79, 76.1% of them obtain1-36 hours of care time. Among the disabled elderly aged 80-89, 65.1% of them obtain 1-36 hours of care time. Among the disabled elderly aged 90-99, 54.1% of them obtain 1-36 hours of care time. Among the disabled elderly aged 100 and above, 45.7% of them obtain 1-36 hours of care time.

In terms of gender group, among the elderly women, 50.1% of them obtain 1-36 hours of care time. Among the elderly men, 60.5% of them obtain 1-36 hours of care time.

There are no obvious differences between the urban elderly and the rural elderly in care time with 1-36 hours. Among the disabled elderly living in town, 54.6% of them obtain 1-36 hours of care time. Among the disabled elderly living in country, 53% of them obtain 1-36 hours of care time.

According to the above analysis, we find the care time that the disabled elderly obtaining is generally low, indicating that the care demands of the disabled elderly can’t be satisfied.

Table 4: Distributions of Care Time by Age, Gender, Living Situation Groups (hours)

Care Time		1-36	37-72	73-108	109-144	145-168	Unclear
Age Groups	60-69	81.8	0	6.8	0	9.1	2.3
	70-79	76.1	8.6	5.1	0.5	5.6	4.1
	80-89	65.1	12.1	4.4	3.5	12.9	2
	90-99	54.1	14.3	5	4.7	19.6	2.3
	100+	45.7	13.6	8.5	5	23.8	3.4
Gender Groups	Man	60.5	13.5	5.4	3.6	14.1	2.9
	Woman	50.1	13	7	4.7	22.2	3
Living Situation Groups	Town	54.6	12.9	6	2.9	20.8	2.8
	Country	53	13.4	6.7	5.1	19	2.8

Note: According to Chinese Longitudinal Healthy Longevity Survey (CLHLS) of the Peking University in 2018, the author calculate with the statistical software of SPSS26.0.

4.2. Socialized Care

4.2.1. Community Care

Community care provided by the communities includes a wide ranges of services, including daily care, medical services, mental health services, social or cultural activities that provided for the elderly at home.

As shown in Table 5, the disabled elderly living in urban areas often own better service. Among the disabled elderly in town, 20.9% of them can get daily care, while among the disabled elderly in country, 8.9% of them can get daily care. We can know the significant difference of the community care that the disabled elderly can acquire. It is resulted from that the disabled elderly in the urban areas can get community care easily because they live together.

Table 5: Distributions of Service Items by Living Situation Group (%)

Service Items	Town		Country	
	Own	Don't Own	Own	Don't Own
Daily Care	20.9	79.0	8.9	91.1
Door-to-door Medical Delivery	31.0	68.9	39.6	60.4
Mental Care	24.8	75.1	12.7	87.3
Daily Shopping	14.7	85.2	9.7	90.3
Social Activities	33.7	66.2	16.2	83.8
Legal Aid	30.4	69.5	16.4	83.6
Health Knowledge	43.9	56.0	41.0	59.0

Note: According to Chinese Longitudinal Healthy Longevity Survey (CLHLS) of the Peking University in 2018, the author calculate with the statistical software of SPSS26.0.

4.2.2. Institutional Care

Institutional care refers to that the disabled elderly live in special nursing institutions, and all or most of the care costs come from society (government and other organizations) [9]. With the acceleration of China's aging process, the government issues a series of pension policies. Nursing institutions have also developed rapidly. According to the Ministry of Civil Affairs of the People's Republic of China, by the end of 2020, there were 329,000 institutions and facilities for the aged, with a total of 8.21 million beds for the aged, an increase of 5.9% over the previous year.

There are obvious differences between urban and rural areas in the actual operation of institutional care in China. In town, private nursing institutions and public nursing institutions are developing simultaneously [10]. Private nursing institutions can provide more professional care for the disabled elderly, but the service price is high. Public nursing institutions generally take self-care as the condition for admission, thus turning away some disabled elderly people.

5. Conclusion

This paper uses the data from CLHLS 2018 to analyse the present situations and care modes of China's disabled elderly people. We can get the results as follows: (1) There are significant structural differences among the disabled elderly. From the perspective of age, the proportion and degree of disability of the elderly in China continue to rise with the increase of age. From the perspective of gender, the proportion of female disabled elderly is much higher than that of male disabled elderly. From the perspective of urban and rural areas, the proportion of urban disabled elderly is higher than

that of rural disabled elderly. (2) In family care, the care subjects of the disabled elderly mainly come from families, the source of care costs is single, and the care time is generally low. (3) There is a significant difference between urban and rural areas in community care, and the proportion of services owned by urban disabled elderly is higher than that of rural disabled elderly. (4) There is a shortage of professional nursing staff in institutional care, and the basic hardware facilities of rural nursing institutions are far behind those of urban nursing institutions.

Based on the above conclusions, this paper puts forward the following suggestions. First, considerable efforts are needed by the government to develop supportive and effective policies to increase the support for family care for the disabled elderly. Second, we should take effective measures to improve the services of community care. In order to more reasonably meet the care needs of different disabled elderly people, community care service stations should provide diversified service contents. Third, the government should pay attention to the training of nursing service talents and expand the enrollment of medical schools. Fourth, the government should strengthen financial support and formulate subsidy policies for the transformation and upgrading of nursing institutions.

Author Contributions

CKQ drafted and revised the text. XL and TXB designed, drafted, and revised the text. XL supervised the analyses. Three authors read and approved the final version of the manuscript.

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