



Study on Quality of Life of the Allochthonous Elderly in Panzhihua City

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DOI: 10.32629/ajn.v3i1.979

Abstract: Objective — To know about the quality of the allochthonous elderly in Panzhihua city comprehensively, and to analyze its influencing factors. Methods — By using a self-designed questionnaire and concise health questionnaire of SF-36, quality of life, the basic situation of the allochthonous elderly (328) in Panzhihua city were investigated and analyzed. Results: the quality of life of the allochthonous elderly in Panzhihua city was good. Single factor and multi factor analysis showed that self-care ability, chronic bronchitis, other chronic diseases, medical cost sources, or without coronary heart disease, arrival time and occupation were important factors affecting the quality of living quality of the allochthonous elderly in Panzhihua city. Conclusion — To improve the basic facilities of the related pension institutions, improve the development of the health industry, enhance the self-care consciousness of the allochthonous elderly in different places, and actively mobilize the responsibility and attention of the family and the society on the allochthonous elderly in the different places, and play a vital role in improving the quality of life of the allochthonous elderly in different places.

Keywords: Panzhihua city, the allochthonous elderly, quality of life

Since the 21st century, with the continuous development of the long-distance health care model in China, the elderly population of "migratory birds" has shown a trend of continuous growth. So far, nearly 20 cities in Shandong, Liaoning and other provinces have developed "migratory bird" elderly care services. In addition, the representative areas are Panzhihua, Hainan, Dandong, Gulangyu and Qingdao. Due to the increasing social trend of aging in China, the traditional home care mode can no longer meet the needs of the elderly. In order to enjoy the warm sun in Panzhihua's winter, more and more old people choose different health care mode. Every winter and summer, many other old people will make a special trip to Panzhihua to winter life. In order to understand the current status and related influencing factors of the quality of life of allochthonous elderly in Panzhihua city, this study used self-made questionnaire and SF-36 short form health questionnaire to investigate the basic information and quality of life of the elderly in the areas of Dongdong District, Renhe District and Miyi County of Panzhihua City in November 2017. The score and influencing factors were analyzed from 8 aspects: physical function (PF), role physical (RP), body pain (BP), general health status (GH), vitality (VT), social function (SF), role emotional (RE) and mental health (MH).

1. Objects and methods

1.1 Survey subjects

From November 2017 to January 2018, convenience sampling was used to randomly select 3-4 old-age care institutions in each district of Panzhihua City, Renhe District and Miyi County, and a face-to-face questionnaire survey was conducted among 328 elderly residents from different places. Inclusion criteria: ① From cities outside Panzhihua; ② Habitation in Panzhihua one month before the survey; ③ Clear consciousness, no obvious language barrier with the ability and willingness to accept this survey.

Exclusion criteria: ① People with mental diseases or language disorders; ② People with serious physical diseases; ③ Unwilling to cooperate. A total of 400 questionnaires were distributed and 328 valid questionnaires were recovered, with an effective rate of 82%.

1.2 Survey methods

1.2.1 Research tools

① The "Questionnaire on the Quality of Life of the Allochthonous Elderly in Panzhihua city" was designed by the researchers on the basis of the references. General information includes place of birth, gender, age, marital status, education level, occupation, per capita monthly income, etc. ② The international Short Form Health Status Scale (SF-36), which is currently internationally recognized as a universal quality of life assessment scale with high reliability and validity [1], was

revised by Sun Yat-sen Medical University in Chinese [2]. The SF-36 includes 8 dimensions: Physical function (PF),role physical (RP), body pain (BP), general health status (GH), vitality (VI), social function (SF), role emoficnal (RE), and mental health (MH), the higher the score, the better the quality of life.

1.2.2 Statistical methods

Epidata 3.0 was used to establish the database. SPSS 17.0 software was used for statistical analysis. T-test and multi-factor linear regression were used to analyze the current situation of the quality of life of the allochthonous elderly in Panzhihua city, and the main influencing factors were screened out.

2. Results

(1) The general demographic data of the allochthonous elderly in Panzhihua city are as follows. A total of 328 residents were investigated, including 278 (84.8%) from within the province and 50 (15.2%) from outside the province. There were 130 patients (39.6%) with hypertension and 198 patients (60.4%) without hypertension. There were 43 patients (13.1%) with diabetes and 285 patients (86.9%) without diabetes. There were 30 (9.1%) patients with rheumatism and 298 (90.9%) patients without rheumatism. There were 46 patients (14.0%) with coronary heart disease and 282 patients (86.0%) without coronary heart disease. There were 282 patients (80.6%) with chronic bronchitis and 45 patients (13.7%) without chronic bronchitis. There were 69 (21.0%) patients with other chronic diseases and 259 (79.0%) patients without other chronic diseases, as shown in Table 1.

Table 1. Demographic data of allochthonous elderly in Panzhihua city

Projects		Population (n)	Percentages (%)
General data			
Origin	Within Province	278	84.8
	Outside Province	50	15.2
Gender	Male	169	51.5
	Female	159	48.5
Age	60-64	51	15.5
	65-69	41	12.5
	70-74	64	19.5
	75-79	95	29.0
	80 and above	77	23.5
Marital status	Married	276	84.1
	Unmarried	52	15.9
Educational background	Primary school and below	62	18.9
	Junior high school	74	22.6
	Senior high school (including technical secondary school)	69	21.0
	University (including colleges)	120	36.6
	Postgraduate and above	3	9.0
Occupation	Farmer	40	12.2
	Employees	84	25.6
	Individual labour	16	4.9
	Staff and workers of administrative and public institutions	103	31.4
	Others	85	25.9
Per capita monthly income	Less than 1000 Yuan/Person	17	5.2
	1000-3000 Yuan/Person	120	36.6
	3000-5000 Yuan/Person	120	36.6
	5000 Plus	71	21.6
Self-care ability	Normal	303	92.4
	Inability	25	7.6

(2) Physical function (PF), body pain (BP), general health (GH), vitality (VT), social function (SF), Role emotional (RE), mental health (MH), total physical health (PCS) and total mental health (MCS) of allochthonous elderly in Panzihua city were significantly higher than those of the elderly in Chongqing and Chengdu, and the difference was extremely significant ($P < 0.01$). See Table 2 for details.

Table 2. Comparison of the quality of allochthonous elderly in Panzihua city and those in Chongqing and Chengdu

Projects	Panzihua	Chongqing	Chengdu
PF	82.90±14.26	74.83±24.95**	72.60±24.21**
RP	70.27±38.52	67.03±40.54	51.01±49.00**
BP	81.02±21.37	72.52±21.06**	62.95±18.74**
GH	60.74±16.48	47.96±26.05**	50.09±15.97**
VT	80.82±11.31	63.88±17.92**	77.14±17.33**
SF	83.22±17.41	73.81±25.87**	93.79±30.93**
RE	84.96±33.04	78.79±38.58**	78.42±39.50**
MH	85.77±11.24	67.48±17.37**	77.20±16.39**
PCS	73.73±16.96	66.56±20.73**	59.16±26.98**
MCS	83.69±13.74	71.37±17.84**	81.64±26.04**

* $P < 0.05$, ** $P < 0.01$

(3) The results of univariate analysis showed that there were significant differences in PCS and MCS among the patients with chronic bronchitis, other chronic diseases and self-care ability ($P < 0.05$). In addition, the source of medical expenses was only statistically significant for PCS ($P < 0.05$). Table 3 shows that PCS with public medical expenses are better than those with self-funded medical expenses; PCS and MCS without chronic bronchitis and other chronic diseases were better than those with chronic bronchitis and other chronic diseases. The level of PCS and MCS that can fully take care of themselves is high, as shown in Table 3.

Table 3. Analysis of influencing factors on the quality of allochthonous elderly in Panzihua city

Influencing factors		PCS			MCS		
		Scoring	F	P	Scoring	F	P
Sources of medical expenses	Self-supporting	70.18±16.70	9.457	0.002	84.53±13.47	0.777	0.379
	Government insurance	76.01±16.18			83.16±13.91		
Chronic bronchitis or not	Yes	65.50±17.34	12.729	0.000	78.01±6.10	9.125	0.003
	No	75.04±16.56			84.60±13.13		
Any other chronic diseases	Yes	67.18±19.09	13.548	0.000	79.04±14.93	10.317	0.001
	No	75.48±15.94			84.93±13.15		
	No	73.10±16.93			83.55±13.69		
Self-care ability	Normal	74.97±15.60	23.500	0.000	84.81±12.72	28.421	0.001
	Partly	58.75±21.22			70.19±18.12		

On the basis of the previous single factor correlation analysis, multiple regression statistical analysis was used to find out the main factors affecting the quality of life of the elderly in the remote health care. Seven variables including self-care ability, chronic bronchitis, other chronic diseases, sources of medical expenses, coronary heart disease, arrival time and occupation were used as independent variables. PCS and MCS were the dependent variables. At the entry level of 0.05 and the exclusion level of 0.10, multiple linear stepwise regression analysis was conducted to screen out the influencing factors closely related to the quality of life of the elderly in remote health care. The results showed that the main influencing factors of the quality of allochthonous elderly in Panzihua city were self-care ability, chronic bronchitis, other chronic diseases, sources of medical expenses, coronary heart disease, arrival time and occupation, as shown in Table 4

Table 4. Multiple regression analysis of influencing factors on the quality of allochthonous elderly in Panzhihua

Influencing factors	PCS			MCS		
	Beta	t	P	Beta	t	P
Self-care ability	- 0.218	- 4.258	0.000	- 0.254	- 4.924	0.000
Chronic bronchitis or not	0.197	3.855	0.000	0.160	3.107	0.002
Chronic diseases or not	0.188	3.678	0.000	0.166	3.213	0.001
Sources of medical expenses	- 0.163	3.176	0.002	- 0.082	- 1.581	0.115
Coronary heart disease or not	0.100	1.961	0.051	0.036	0.693	0.489
Arrival time	- 0.007	- 0.140	0.888	0.132	2.577	0.010
Occupation	0.080	1.541	0.124	0.106	2.059	0.040

3. Discussion

The results of this study show that the scores of quality of allochthonous elderly in Panzhihua were significantly higher than those in Chongqing and Chengdu in terms of physical function (PF), body pain (BP), general health (GH), vitality (VT), social function (SF), role emotional (RE), mental health (MH), physical health (PCS) and mental health (MCS). And the difference was significant ($P < 0.01$). In terms of physiological function, there is no significant difference between Panzhihua and Chongqing. In terms of social function, the elderly in Chengdu scored significantly higher than those in Panzhihua. This may be related to the differences in region, climate, economy and culture among cities. According to the research of Wang Nan et al., beautiful scenery, comfortable environment and distinctive cultural landscape play a very important role in human physical and mental health [1].

Located at the junction of Sichuan and Yunnan in southwest China, Panzhihua has an average annual temperature of 20°C, with warm winter and cool summer. It has "six dimensions" that are very suitable for health and well-being — temperature, humidity, altitude, excellent yield, cleanliness and tranquility, and green degree. In addition, there is plenty of sunshine, with up to 2700 hours of sunshine throughout the year and sunny all year round [2]. In addition, Panzhihua is also a multi-ethnic city, consisting of 42 ethnic groups such as Han, Yi and Lisu, creating a unique cultural landscape. Although the economic level of Panzhihua is lower than that of Chengdu and Chongqing, the quality of life not only depends on the material living level, but also depends on many factors such as political atmosphere, cultural background and ideology [3].

Panzhihua is one of the first pilot cities combining medical care and nursing care in China, and ranks among the top 50 cities for elderly care in China. The city's health care, leisure tourism, cultural creativity, sports and fitness, real estate and other service industries develop in tandem with the health care industry, providing comprehensive and multi-level old-age security for the elderly in remote areas. Therefore, the influence of comprehensive factors is the main reason for the difference in the quality of allochthonous elderly in Panzhihua and Chengdu and Chongqing.

The results of one-way analysis of variance and multiple linear regression analysis showed that the seven influencing factors that were most closely related to the quality of allochthonous elderly in Panzhihua are self-care ability, chronic bronchitis, other chronic diseases, sources of medical expenses, coronary heart disease, arrival time and occupation.

(1) Self-care ability. Self-care ability is a person's ability to manage and take care of their own life, which is an important aspect of the health status of older people. The poor self-care ability of the elderly indicates that their health status is low [4]. The results of this study show that there is a positive correlation between the quality of life and self-care ability (ADL) of the allochthonous elderly in Panzhihua, and the difference is significant. The quality of allochthonous elderly in Panzhihua who are fully self-cared is significantly better than that of some self-care residents, and the scores in PCS and MCS are statistically significant. This result shows that with the decline of self-care ability, the quality of life of the elderly residents in remote areas shows a downward trend in all aspects. This is consistent with the conclusion of Luo Min [5] et al., who investigated the quality of life of the elderly in urban nursing institutions in Beijing.

(2) Chronic bronchitis and other chronic diseases. With the increasing aging of the population, the incidence of chronic diseases increases, resulting in a decline in the self-care ability of the elderly in remote areas, thus affecting their quality of life [6]. This study showed that there was a statistically significant impact of chronic chronic diseases on PCS and MCS scores of the quality of allochthonous elderly in Panzhihua. Among them, chronic bronchitis has a more obvious effect on the quality of life of the elderly than other chronic diseases. This may be related to the recurrence of chronic bronchitis and the psychological burden of the elderly on their own health conditions. Health status is the first influencing factor in all fields of the quality of life of the elderly [7]. Relevant studies have shown that good health status is a protective factor for quality of

life[8]. The presence or absence of other chronic diseases is one of the important indicators to measure the quality of life of the elderly in remote areas[9]. It is found in this study that the PCS scores of the residents without other chronic diseases are higher than those with other chronic diseases, indicating that whether there are other chronic diseases affecting the quality of life of the residents, which is consistent with the research conclusions of Xie Zhi et al.[10].

(3) Medical expenses. The source of medical expenses is closely related to the quality of life of the remote Kang elderly, which reflects the family economic status of allochthonous elderly and the basic situation of the local medical security system. The results of this survey show that: the proportion of public medical expenses is higher, accounting for 61%, and the self-funded account for 31%, and the source of medical expenses for the remote health pension is better than the elderly self-funded medical expenses, the quality of life of the remote health pension and the source of medical expenses is significantly different. This may be related to the satisfaction with the local medical security system, which reduces the economic expenditure of medical expenses. This result is consistent with the investigation result of Zhong Huasun [11]. Therefore, it is necessary to pay attention to the relevant medical security system in order to improve the quality of life of the elderly in remote areas.

(4) Coronary heart disease. Coronary heart disease (CHD), as a kind of elderly chronic cardiovascular disease, has many unfavorable influences on the elderly body, its long duration and serious pathological changes bring physical and psychological blow in the elderly, long-term use of drugs, was forced to change your lifestyle and eating habits, after onset of body pain and high medical costs, To a certain extent, it affects the quality of life of the elderly in remote areas. This study showed that the quality of life of patients with coronary heart disease was significantly lower than that of patients with diabetes, hypertension and rheumatism.

(5) Arrival time. This study shows that in 2016, Panzhihua has the largest proportion of elderly residents from other places, which may be related to the development of "sunshine health care" industry in Panzhihua in recent years [12], attracting a large number of elderly residents from other places to Panzhihua. It can be seen that the arrival time reflects the affirmation of the old people in different places to the old-age care area, and reflects the quality of life of the old people in different places to some extent.

(6) Occupation. In modern society, occupation has become a comprehensive index to measure people's living standard and quality of life. The differences in occupation and experience inevitably lead to the differences in the level of demand, expectation, experience and adaptability of the elderly in different places. Therefore, occupation affects people's health to a certain extent, and also seriously affects the quality of life of the elderly. This study confirmed that occupation is one of the important factors affecting the quality of allochthonous elderly. The score of administrative staff is higher than that of other occupations, which is consistent with the research results of Li Xiaohui and Li Tianlin [13] et al. It can be seen that occupation is an important demographic data affecting the quality of life of those who come from other places.

In conclusion, the factors affecting the quality of allochthonous elderly mainly reflected in self-care ability, chronic diseases, medical expenses source, presence of coronary heart disease (CHD), arrival time and occupation, and improved social security system is required to solve these problems. To improve the quality of life of the elderly, we should strengthen their awareness of self-centered health care, accelerate the development of the community service system for the elderly, and encourage them to participate in physical exercise regularly.

References

- [1] Wang Nan, Wang Fang. The role of coastal convalescent resources in chronic disease rehabilitation in Qingdao[J]. *Chinese Journal of Convalescent Medicine*, 2013,22(10):885-886.
- [2] Huang Xu, Li Yi, Wang Feng, Climate characteristics and winter thermal resources exploitation in Panzhihua City[J]. *Journal of Sichuan Meteorology*,2006,26(1):20-25.
- [3] Chen Linying, Wu Hanrong, Mai Jincheng, Duan Jiali, Wang Qingxiong: A comparison of quality of life between primary and secondary school students in Beijing and Guangzhou[J]. *Chinese Journal of Social Medicine*, 2007,24(4):268-270.
- [4] Ware JE Jr.PhD mark Kosinski MA,Maarthas S,Bayliss MSC,Comparison of methods for the scoring and statistical analysis of SF-36 health profile and summary measures:summary of results form of results form the Medical Outcomes Study [J]. *J Med care*. 1995, 4: AS264 - AS279.
- [5] Luo Min. *Investigation on the quality of life of the elderly in Beijing urban nursing institutions*[M]. College of Military Medical Continuing Education,2005:31.
- [6] Hu Shanju, Wu Bingyi, Dong Yi, Shen Yuqi.Analysis on the quality of life and its influencing factors of the elderly in Shandong Province[J].*Chinese Health Service Management*,2014,317(11):867-871.

- [7] Liu Juanjuan, Dong Qing, Feng Xiaoming, et al. Current situation and analysis of quality of life of rural elderly in chizhou city, anhui province[M].*Chinese Journal of Gerontology*,2012,4(32):1462-1464.
- [8] Bell CN,Thorpe RJ Jr,Laveist TAI Race/ethni city and hypertension:the role of social support[J].*Am Hypertens*, 2010, 23 (5) : 534-540.
- [9] Huang HC,Chou CT,Lin KC,et al.The relationship between disability level,health-promoting lifestyle,and quality of Life in outpatients with systemic lupus erythematosus[J].*J Nurs Res*,2007,15:21-32.
- [10] Xie Zhi, Chen Lizhang, Xiao Yazhou, et al. Correlation between sleep quality and quality of life in rural elderly in a county of hunan province[J].*Chinese Journal of Gerontology*,2012,2010,30(12):1721-3.
- [11] Zhong Huasun, Xiao Liu-hong, et al. To investigate the quality of life of the elderly in Guangzhou.*Chinese Journal of Nursing*,1998,33(6)314-317.
- [12] Zhong Xiahong, Wang Ke, Ruan Yinxiang. Research on the integrated development of "health care +" industry in Pan-zhuhua [J]. *Panzhuhua University*,2018, (4):105-111.
- [13] Li Xiaohui, Li Tianlin, et al. The effect of occupation on the quality of life of the elderly. *Chinese Journal of Gerontology*,1999,1(18):48-49.