

Research on community elderly quality of life and its influencing factors in Changchun City of Jilin Province

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Abstract. Objective: To understand the status and influencing factors of the quality of life of the elderly patients in the community of Changchun City, and provide the basis for drawing up the interventions about improving the quality of life of the elderly patients in the community. Methods: 498 elderly patients were investigated by using random sampling method and QOL - BREF and self-designed questionnaire. Results: The scores of the quality of life were: PSYCH (13.00±1.91), ENVIR (13.39±2.23), PHYS (13.47±1.71) and SOCIL (14.21±2.56). The scores of quality of life self-evaluation and health condition self-evaluation were respectively (72.01±17.14) and (66.30±14.23). The results showed that gender, age, degree of education, marriage situation, vocation, income level can affect four aspects of the quality of life. The main factors influenced the scores of QOL were: leisure opportunities, satisfaction with health care services, satisfaction with sleep, interpersonal relationship, self-appreciation in appearance and satisfaction with the degree of the ability of daily life. Conclusion: The effective measures should be taken to improve the quality of the elderly patients, such as improving the healthy care function, establishing great supporting system in community.

1 Introduction

The elderly population of China is first in the world^[1]. The fifth population census showed that Jilin Province entered the aging society since 2003, there were about 3.095 million old people who were more than 65 years old in Jilin Province, accounting for 11.24% of the total population by 2015^[2]. As the aging process of Jilin Province deepening, the aging problem widely attracts the focus of the people, especially the old people's quality of life. Because of affecting by economy and medical level, the elderly of Jilin Province have their own special life form, quality of life is not optimistic. Taking Changchun City as an example, to investigate the quality of life and influence factors of old people in community, to provide evidence for making the intervention measures of the quality of life.

2 The respondents and methods

2.1 The respondents

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By using simple random sampling method to extract six communities in Changchun City from January to May in 2015. With the help of community staff and the cooperation of the old people who are more than 65 years , we finished 500 questionnaires, of which 498 is efficient, the effective rate is 99% .

2.2 Research method and content

Under the status that the respondents knew all the details, with the guidance of the investigators, the old people filled questionnaires honestly. The survey content includes General Situation Questionnaire and the QOL-BREF. The General Situation Questionnaire includes the basic information such as gender, age, marriage, income, education, vocation and so on. And QOL-BREF^[3] includes 26 items, which covers PHYS, PSYCH, SOCIL and ENVIR and another two independent analysis items. According to the positive score (the higher the score, the higher the quality of life), the average score of subordinate entries plus 4 times is the scores of the related field.

2.3 Statistical methods

Established a database with SPSS16.0 software, making data input, t test, variance analysis and multiple linear regression statistical analysis.

3 Results

3.1 The result of QOL-BREF

PSYCH (13.00±1.91) scored lowest, ENVIR (13.39±2.23), PHYS (13.47±1.71), SOCIL (14.21±2.56) scored highest. The score ≥ 60 of self-evaluation score of quality of life and self-evaluation score of health condition that accounted for 77.25% and 72.62%, and the scores were respectively (72.01±17.14)and(66.30±14.23).

3.2 The result of single factor variance analysis

Gender, age, education, marriage, vocation, income level all can affect the quality of life. The male scored more than female in the field of physiological($p < 0.05$). Age was negatively related to the scores of all areas in the quality of life($p < 0.05$). The old people of high culture scored also higher in PSYCH and PHYS($p < 0.05$). The elderly who were in the state of marriage scores higher in PSYCH and PHYS($p < 0.05$). Workers scored low in all area of quality of life except SOCIL, but the medical staff scored higher than other people in ENVIR, PSYCH and PHYS($p < 0.05$).The higher the income, the higher the score in ENVIR and PSYCH($p < 0.05$). As shown in Table 1 and Table 2.

Table 1. Single factor variance analysis result ($\bar{x} \pm s$)

Items	Category	Quantity	ENVIR	SOCIL	PSYCH	PHYS
Gender	Male	203	13.53±2.16	14.39±2.51	13.12±2.68	13.72±1.51*
	Female	295	13.29±2.26	14.09±2.59	13.00±1.97	13.29±1.81*
Age	65~75	290	13.63±2.28*	14.61±2.50*	13.51±2.54*	13.78±1.65*
	76~85	190	13.25±2.51*	14.07±2.67*	12.38±1.63*	13.05±1.66*
	≥ 85	18	13.03±2.06*	13.61±2.53*	12.66±2.16*	12.73±2.02*

Education Level	Primary school and below	173	13.37±2.49	13.97±2.87	12.94±1.98	13.22±1.71*
	Middle school	275	13.36±2.12	14.31±2.41	13.06±2.50	13.53±1.66*
	College degree or above	50	13.59±1.71	14.50±2.16	13.37±2.04	13.95±1.88*

Note: *means p<0.005

Table 2. Single factor variance analysis result ($\bar{x} \pm s$)

Items	Category	Quantity	ENVIR	SOCIL	PSYCH	PHYS
Marital status	Unmarried	1	13.50±0.00	10.67±0.00	12.00±0.00	13.54±0.00*
	Married	437	13.40±2.20	14.28±2.56	13.08±2.32*	14.29±0.00*
	Divorced	1	12.74±0.00	13.71±0.00	12.41±0.00	12.86±0.00*
	Widow or Widower	59	14.06±2.17	13.81±2.33	12.38±2.40	12.93±2.72*
	Teacher	40	13.35±1.71*	13.66±2.53	13.75±4.80*	13.40±1.50*
vocation	Worker	303	13.05±2.21*	14.05±2.70	12.65±1.77*	13.27±1.72*
	Self-employed	86	14.00±2.55*	14.65±2.33	13.00±1.68*	13.58±1.51*
	Medical staff	20	14.52±1.57*	14.46±2.25	14.33±2.30*	14.74±1.81*
Income (Yuan)	≅ 1500	70	12.50±2.03*	13.91±2.83	12.64±1.96	13.26±1.75*
	1501~2500	232	13.22±2.42*	14.43±2.21	13.28±1.95	13.33±1.74*
	2501~3500	169	13.89±1.89*	14.48±2.26	13.40±2.70	13.72±1.52*
	≥3501	27	14.00±1.96*	14.51±2.59	13.72±2.31	13.99±2.13*

Note: *means p<0.005

3.3 The result of multiple linear regression analysis for quality of life

Table 3. The result of multiple linear regression analysis for quality of life

	Factors	Regression coefficient	Standard error	t	p
ENVIR	Leisure entertainment opportunities	1.053	0.060	17.510	0.000
	Satisfaction with health care service	0.821	0.069	11.977	0.000
	Satisfaction with sleep	0.330	0.074	4.457	0.000
	Satisfaction with interpersonal relationship	0.314	0.078	4.005	0.000
	Satisfaction with interpersonal relationship	1.646	0.076	21.589	0.000
SOCIL	Self appreciation in appearance	0.410	0.085	4.800	0.000
	Satisfaction with sleep	0.263	0.090	2.928	0.004
	Self appreciation in appearance	0.772	0.090	8.619	0.000
PSYCH	Satisfaction with daily life ability	0.603	0.100	6.044	0.000
	Satisfaction with health care service	0.185	0.077	2.391	0.018
	Satisfaction with daily life ability	1.174	0.086	13.689	0.000
PHYS	Satisfaction with sleep	0.639	0.083	7.745	0.000
	Leisure entertainment opportunities	0.335	0.054	6.143	0.000

The factors that influenced ENVIR in the descending order were: leisure opportunity, satisfaction with health care services, satisfaction with sleep, satisfaction with interpersonal relationship. The factors that influenced SOCIL in the descending order were: satisfaction with interpersonal relationship, self-

appreciation in appearance, satisfaction with sleep. The factors that influenced PSYCH in the descending order were: self-appreciation in appearance, satisfaction with daily life ability, satisfaction with health care services. The factors that influenced PHYS in the descending order were: satisfaction with daily life ability, satisfaction with sleep, leisure opportunity. As shown in Table 3.

4 Discussions

The survey results show that the quality of life of old people in Changchun City is in medium level. The scores of self-evaluation of Quality of life and health condition are both more than the four fields(PHYS,PSYCH,SOCIL,ENVIR) in quality of life, and this is basically identical with Hong Xu's research results^[4].

4.1 The result of multiple linear regression analysis for quality of life

4.1.1 Gender, age and marriage

The male scored higher than female in the field of physiological ($p < 0.05$), due to differences in physiological structure between male and female, women are aging faster than men. After retirement women take more family responsibility than men, so compared with men, women are easy to produce physical problem. Due to immunity of the organism and athletic ability declined, the older the lower that the scores of quality of life. The elders who were in marriage score higher, it is because that the couple could take care of and company with each other.

4.1.2 Education, vocation and income level

The higher level of education, the more opportunity to obtain health information that the old people have, the stronger self-health care consciousness, so it could improve the elderly living conditions, optimize the physical and mental state, improve the scores of mental and physical fields. This is basically identical with Hanli Zhan's research result^[5]. In different vocations, the more opportunity that contact with pharmaceutical and health care knowledge, the more score were obtained in ENVIR PSYCH and PHYS. The higher the income level, the more score were obtained in ENVIR and PHYS, It is basically identical with Yuli Wang's research result^[6].

4.1.3 Leisure entertainment opportunities

Because it is not convenient for the elderly do physical activity and their visual, acoustic, and expression ability gradually decline, most old people will choose to stay in the room to kill time, this will definitely reduce the old people's leisure entertainment opportunities, at the same time they give up the opportunity to alleviate physical fatigue, restore physiological balance, expand the scope of social activities and get comfort in mind, this is the reason that leisure entertainment opportunities was positive correlation to ENVIR, PSYCH and PHYS.

4.1.4 Satisfaction with sleep

Sleep is the main indicator that measures old people's physiological function, it almost takes up one third of the whole life, so it is closely related to people's health, sleep determines the quality of life in a sense. This study shows that the elderly who were satisfaction with their sleep, their score were higher in PHYS. Poor quality of sleep will react on the PHYS, PSYCH, SOCIL and ENVIR. The research result is basically identical with scholars both in China and abroad^[7,8].

4.1.5 Satisfaction with the ability of daily life

The ability of daily life is an important indicator that evaluates quality of life of the old people, it is closely related to physical and psychological health, the elderly who are not satisfied with their daily life ability will have a lower level of quality of life. Once the old people lose self-care ability, it will not only restrict their freedom, lower their living standards, but also bring a heavy load to family and society. It is basically identical with Jinli Yang's^[9] and Xueyuan Liu's^[10] research results.

4.1.6 Satisfaction with interpersonal relationship

Interpersonal relationship is the basic social needing. This study showed that interpersonal relationship was not only affect SOCIL, but also had a certain effect on the ENVIR. This shows that a good interpersonal relationship can help the old people obtain a good quality of life, the old people's main relationships is family relationships. Relationships between mother-in-law and daughter-in-law, parents and children, husband and wife is good or not also have effect on the quality of life.

4.1.7 Satisfaction with health care service

Preventing and treating disease is the main function of health care service system. As the growth of the age and the spread of the epidemic disease, the health care services that the elderly demand for is also growing, health care service has become a part of the life of the elderly, convenient health care service system will help to improve the life quality of old people.

4.1.8 Self-appreciation in appearance

As the growth of age, the old people have great changes in appearance, they lose their youth and beauty, became doddering and ill, walk unsteadily, some old people are afraid to look into the mirror and unwilling to accept aging. Survey results show that self-appreciation in appearance directly affect the score in PSYCH, it also have certain influence in SOCIL. Because those who appreciate themselves are more likely to please themselves, have more confidence, they're more likely to have better chance and social relationships.

4.2 Suggestions to improve the quality of elderly life

Improve the community medical and health care function, establish system of home visit, physical examination and personal health education. The scientific and effective intervention of physical and mental health for the elderly can improve the elderly's self-care ability, remove obstacles of obtaining health knowledge, and then improve the elderly's quality of life. It was reported that we can improve the ability in health knowledge, beliefs, behaviours and skills to improve the elderly health level^[11].

To establish perfect supporting system in community, offer more care social support for the elderly, take the elderly who are unable to move freely especially those who lost companion to the crowd, to participate in the activities in community and have an enjoyable life etc.

The society should improve the insurance coverage of the elderly health, establish the elderly care insurance system, make it easy for the elderly to go to see a doctor, improve the elderly health care system, make sure that the elderly can obtain adequate treatment and care in order to improve the quality of survival.

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