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Effects of Social Insurance on Health Status and Quality of Life of the Middle-Aged and Elderly

Meijun NING[1], Luoru MA[2], Jie MENG[3], Dongxu ZHANG[4]

Abstract

A nation is obligate to take care of people's basic living security, maintain overall social security, and eliminate serious disparity. Humans are a mutual assistance society. The government's complete planning could enhance the prosperity of society, and complete social insurance planning would gradually replace social assistance. Along with the development of technology, the advance of medicine and health, as well as the promotion of social welfare, people's life expectancy is prolonged that aging demographic structure becomes the concern of countries in the world. The public increases the demands for social welfare, and the government regards social welfare as the policy focus, aiming to guarantee most people's basic economic security and quality of life based on joint and several liabilities and mutual assistance in the society. It therefore indirectly affects people's needs for social insurance. Taking middle-aged and senior citizens in Beijing as the objects, total 288 valid copies of questionnaire are retrieved, with the retrieval rate 82%. Each copy of questionnaire stands for a valid sample. According to the research results, suggestions are proposed, expecting to help the development of domestic social insurance to reinforce social security and reduce people's doubt about risks through social insurance.

Keywords: the middle-aged and elderly, social insurance, health status, quality of life, social problem.

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Introduction

The emergence of Industrial Revolution had industrial society gradually replace agricultural society and huge population flood into cities for employment. Besides, capitalists, for pursuing the maximization of profits, exploited labors to result in disparity among people, labor relation conflict, and social chaos; social revolution was therefore emerged. Moreover, a lot of social problems left from World War I and II required the positive reconstruction of nations. Governments in various nations changed the measures to stop the reoccurrence of social revolution or unaffordable social problems. It was considered that a nation should interfere in social life and be responsible for dealing with social justice and social security issues. In other words, a nation was obligate to take care of people's basic living security, maintain overall social security, and eliminate serious disparity to gradually develop social democratic state in the 20th century. Social insurance refers to the government providing insurance benefits for the old age, sickness, death, injury, and unemployment of citizens to guarantee the minimum subsistence security. It therefore shows the characteristics of sociality and insurability. Moreover, social insurance presents the concept of national saving and the function of wealth redistribution. It is a system that citizens in the regulated coverage should take out the insurance and could enhance the reasonable redistribution of income. In this case, it would benefit social stability. Humans are a mutual assistance society. The government's complete planning could enhance the prosperity of society. The establishment of social insurance aims to replace social assistance and to bring after event remedy forward to become prevention. Social relief aims to get rid of poverty that means test is necessary. The guarantee coverage is selected and according to local conditions. Completely planned social insurance system could gradually replace social assistance.

Since mid-20th century, the world is experiencing the demographic transition process, where population aging has become the common social phenomenon in the world. European and American advanced countries have gradually stepped into aging since the beginning of 19th century. Along with the development of technology, the advance of medicine and health, and the promotion of social welfare, people's life expectancy is prolonged that aging demographic structure becomes the concern of countries in the world. The elderly would face multiple problems. The faced loss and aging has the elderly social support and network system become more important and indirectly affect the elderly psychological perception and attitudes towards life. Furthermore, the public increases the demands for social welfare that the government regards social welfare as the policy focus, aiming to protect most people's basic economic security and quality of life, based on joint and several liabilities and mutual assistance in the society. It therefore indirectly affects people's needs for social insurance. For this reason, effects of social insurance on health status and quality of life of the middle-aged and elderly are discussed in this study, expecting to help the development of

domestic social insurance, reinforce social security, and reduce people's doubt about risks through social insurance.

Literature review

Bao *et al*. (2017) regarded the nation as socialism, where social security systems did not simply guarantee social security but undertake the important responsibilities and functions for national and social economic development. Regulations of social security systems contain four parts. First, Social Security Act enacted by National People's Congress as the basis and Social Assistance Law, Social Insurance Law, and Social Welfare Law are the main contents, and other department laws as the supplement. Second, minimum subsistence guarantee, emergency relief for victims, "three noes" and "five-guarantee" elderly support, social mutual assistance, poverty alleviation development, as well as specific security of health care, education, housing, and judiciary enacted by State Council and province-level people's congress, and more than 30 social security regulations related provision for the aged, health care, unemployment, giving birth, work-related injury, and nursing insurance and the supplemental insurance, as well as social welfare and occupational benefits, family welfare, charity, community welfare for state-owned enterprise employees, veterans, various civil servants, and brave supporters. 3. The enforcement measures and specific standards of above laws and regulations enacted by State Council related ministries and commissions and local people's congress, local government. 4. Systems, practice, and measures which have not been regulated as laws, regulations, and rules become policies. Gemignani *et al*. (2018) defined social insurance that the government, in order to promote social policies, applied insurance technology, adopted compulsory methods, and provided insurance benefits for citizens or most citizens encountering specific events, such as birth, old age, sickness, death, injury, disability, and unemployment, to guarantee the minimum subsistence security and the basic health care. Similarly, Ullah *et al*. (2017) considered that social insurance was the insurance system with compulsory public law hosted by the nation and took people who might appear social risks of sickness, disability, old age, death, accident, and unemployment as the objects. Kodirov, Xiang and Gong (2017) indicated that social insurance aimed to guarantee people's minimum economic life and basic health care, promote national health status, rather than making profits, and develop the effect of income redistribution, based on social justice, to adjust uneven social income. Consequently, the following hypothesis is proposed in this study.

H1: Social insurance would affect health status.

Du *et al*. (2017) proposed general quality of life as to cover all parts in human life, including environment, marriage, as well as physiological, psychological, social

and spiritual comfort. Xiang and Pang (2018) regarded quality of life as individual subjective perception of overall life satisfaction, containing psychology, society, health, environment, close relationship, and family reaching good state. In addition to individual subjective perception, the evaluation of objective and related issues should be covered. Ren *et al*. (2017) considered that the definition of quality of life should contain subjective well-being, life satisfaction, and objective functions with differentiation from health. The measurement of quality of life was further proposed, according to multiple evaluations of contemporary life under the effect of local culture and value system as well as individual physiological, psychological, social, and spiritual subjective well-being. Chowdhury, Chakravarty, and Hossain (2018) pointed out social insurance as a social and economic system to provide income or compensation for labors losing ability to work, temporarily losing work position, or having loss due to health. It meant that people, when facing old age, sickness, or loss of ability to work, could receive national and social assistance with money and materials to maintain social security and national quality of life. Qiu *et al*. (2017) mentioned that citizens, in face of old age, sickness, or loss of ability to work, had the right to receive national and social material assistance. A nation had to develop social insurance, social relief, and health care businesses for the citizens; apparently, social insurance could help citizens enhance health status and quality of life. Kusner, Paige and Hernandez-Lobat (2017) pointed out social insurance as compulsory insurance which was led by the government and compulsorily took a part of income as social insurance fee as the social insurance fund; under certain conditions, the insured could receive constant income or loss compensation from the fund. Indeed, it was a kind of redistribution, aiming to ensure the maintenance of national quality of life and the stability of social security. Accordingly, the following hypothesis is proposed in this study.

H2: Social insurance would affect quality of life.

Kim & Lee (2018) regarded self-rated status as an integrated idea, a comprehensive indicator for individuals understanding the physiological and psychological health; self-rated status might reflect the sickness of an individual and the accessibility of health resources. Kurnat-Thoma *et al*. (2017) indicated that self-rated status would affect individual willingness to engage in health promotion behavior and activity. Vogt *et al*. (2018) defined elderly health as multiple layers and comprehensiveness, including physical, mental, and spiritual levels, e.g. not being sick, being capable of free activity, being able to take care of oneself and the family, looking health, feeling comfortable, feeling happy, and physical, mental, and spiritual balance. The elderly in physiological, psychological, and social health could achieve the health status of "being capable of living in the society, developing functions, presenting high autonomy, but unnecessarily illness free". Ross *et al*. (2017) mentioned that most elderly, in the aging process, would suffer from one or more than two chronic diseases, which often resulted in life function damage and easy dependency. In this case, reducing suffering from

chronic diseases could slow down the degradation of body function, increase the elderly daily dependency, and allow the elderly living with health and dignity to promote the quality of life and reduce health care and social cost expenses. Olivari *et al*. (2018) revealed that the elderly with good self-rated status showed stronger daily life ability and higher satisfaction with quality of life. Agarwal & Brydges (2018) indicated that prolonged life expectancy did not represent good health and quality of life; quality of life therefore was more important than prolonged life. Seniors without health would affect the independent living ability and reduce the quality of life. A lot of studies with the elderly as the objects regarded quality of life as the key indicator of elderly life. As a result, the following hypotheses are proposed in this study.

H3: Health status presents significantly positive effects on function of activity in quality of life.

H4: Health status shows remarkably positive effects on life satisfaction in quality of life.

Methodology

Measurement of research variable

Social insurance. Referring to Chen *et al*. (2019), social insurance is evaluated by (1) Types of insurance: to measure with the types of social insurance owned; (2) Insurance expense: to measure with the insurance expenses for basic provision for the aged, basic health care, work-related injury, unemployment, and giving birth regulated in Social Insurance Law.

Health status. Referring to Jung *et al*. (2018), the evaluation dimensions for health status contain: (1) Physiological function: the mean of general health scores as the index; (2) Psychological function: the mean of vitality and psychological health scores as the index.

Quality of life. Referring to Cho & Han (2018), quality of life includes two dimensions: (1) Function of activity: to evaluate individual ability of independent life through the interaction with society and environment to specifically present the health-related quality of life of the middle-aged and elderly; (2) Life satisfaction: individual satisfaction with the life.

Research object and sampling data

Taking middle-aged and senior citizens in Beijing as the objects, 288 copies of questionnaire are retrieved, with the retrieval rate 82%. Each copy of questionnaire is regarded as a valid sample. SPSS is used for data analyses, and factor analysis,

reliability analysis, regression analysis, and analysis of variance are applied to test various hypotheses.

Analysis method

Analysis of variance is used in this study for discussing the difference of social insurance in health status and quality of life, and regression analysis is further applied to understand the relationship between health status and quality of life.

Analysis result

Reliability and validity analysis

With factor analysis, health status in this study is extracted two factors of "physiological function" (eigenvalue=3.551, α=0.83) and "psychological function" (eigenvalue=2.838, α=0.87). The cumulative covariance explained achieves 83.577%.

Quality of life, through factor analysis, is extract two factors of "function of activity" (eigenvalue=4.162, α=0.90) and "life satisfaction" (eigenvalues=3.467, α=0.92). The cumulative covariance explained reaches 86.439%.

Effects of social insurance on health status and quality of life

Variance analysis of social insurance on health status. According to analysis of variance, the difference of social insurance in health status is discussed in this study, i.e. analyses and explanations of types of social insurance and insurance expense. From Table 1, types of social insurance present significant difference in physiological function; high types of insurance appear higher physiological function than low types of insurance. Furthermore, types of social insurance reveal remarkable difference in psychological function; high types of insurance present higher psychological function than low types of insurance. In terms of insurance expense, social insurance expense shows notable difference in physiological function; high insurance expense appears higher physiological function than low insurance expense. Social insurance expense also reveals significant difference in psychological function; high insurance expense presents higher psychological function than low insurance expense.

Table 1. Variance analysis of social insurance on health status

variable			F	P	Scheffe post hoc
social insurance	types of insurance	physiological function	14.637	0.000**	high>low
		psychological function	21.588	0.000**	high>low
	insurance expense	physiological function	16.255	0.000**	high>low
		psychological function	26.183	0.000**	high>low

Note: * stands for p<0.05, ** for p<0.01.

Variance analysis of social insurance on quality of life. According to analysis of variance, the difference of social insurance in quality of life is discussed in this study, i.e. analyses and explanations of types of social insurance and insurance expense. From Table 2, types of social insurance show remarkable difference in function of activity; high types of insurance appear high function of activity than low types of insurance. Types of social insurance also reveal notable difference in life satisfaction; high types of insurance present higher life satisfaction than low types of insurance. Moreover, social insurance expense shows significant difference in quality of life; high insurance expense appears higher function of activity than low insurance expense. Social insurance expense reveals remarkable difference in life satisfaction; high insurance expense presents higher life satisfaction than low insurance expense.

Table 2. Variance analysis of social insurance on quality of life

variable			F	P	Scheffe post hoc
social insurance	types of insurance	function of activity	24.126	0.000**	high>low
		life satisfaction	31.755	0.000**	high>low
	insurance expense	function of activity	23.188	0.000**	high>low
		life satisfaction	28.347	0.000**	high>low

Note: * stands for p<0.05, ** for p<0.01.

Correlation analysis of health status and quality of life

Correlation analysis of health status and function of activity. To test H3, the analysis results are shown in Table 3. The analysis results show notable effects of physiological function (β=2.241**) and psychological function (β=2.188**) on function of activity that H3 is supported.

Correlation analysis of health status and life satisfaction. To test H4, the analysis results, Table 3, reveal significant effects of physiological function (β=2.046**) and psychological function (β=2.388**) on life satisfaction that H4 is supported.

Table 3. Analysis of health status to quality of life

dependent variable→	quality of life			
independent variable↓	function of activity		life satisfaction	
health status	β	Beta	β	Beta
physiological function	2.241**	0.235	2.046**	0.192
psychological function	2.188**	0.222	2.388**	0.247
F	36.472		41.913	
significance	0.000***		0.000***	
R2	0.334		0.367	
adjusted R2	0.311		0.338	

Note: * stands for p<0.05, ** for p<0.01, ***for p<0.001

Data source: Self-organized in this study

Conclusion

The research findings show the correlation between social insurance and health status, quality of life of the middle-aged and elderly. Social insurance could largely reduce inequalities on people's health status, especially the assistance in chronically degenerative diseases is more remarkable. Although social insurance develops great help on chronically degenerative diseases, the engaged time and resources are huge. The development of social insurance system in past years would undertake distinct responsibilities and functions, under market economic development and changing time background and reality. With constantly revision, it is expected to effectively utilize medical resource distribution, reduce the burden of the government, and reduce health inequalities, which are considered as the effort and improvement of government decision makers. What is more, social

insurance, with basic guarantee, presents the meaning and function of social transformation to expand public investment and drive domestic industrial market. Nevertheless, the government should fully combine limited resources with private consumption ability to effectively create domestic industry size and persistence. How the government leads the public to release consumption energy and activate domestic market is the key issue in future research. The deep change in global economy results in the advantages of export, investment, and low labor cost in domestic traditional economic development no longer persistent. Future social security should be changed into human capital investment, as the transformation of economic development, and the correspondent systems should focus on the expansion of public welfare of education and public health care.

Recommendations

Aiming at above research results, the following suggestions are proposed in this study.

- Along with the advance of technology and the practice of government policies, national average life expectancy is enhanced. The issue of elderly quality of life is continuously concerned. "Aging" is the physiological symbol. Although it is the degradation of physiological functions, people should learn to adapt in the process. Designing "aging cognition and adaptation" lessons in the learning of community care workers could help elderly care workers correctly apply knowledge and skills to enhance community middle-aged and elderly citizens more positively facing aging to further promote the quality of life.
- Practically, regular health care check could reinforce the screening of top five chronic diseases for the middle-aged and elderly and the actual referral and regular follow-up. The results could be constructed on information platforms for the reference in the health care network and timely provide the sickness control in the treatment process to effectively assist the middle-aged and elderly in reducing or slowing down the occurrence of sicknesses.
- Domestic social insurance rate should be calculated by the Central, according to the rate formula, and have the competent authority announce. The rate formula should include the ratio of population aging index and number of cared people, index of earnings and price index, as well as accumulated insurance financial surplus. Besides, reserve funds should be listed to balance social insurance, containing the sources of yearly income and expenditure balance, premium delinquency charge, and certain ratio of the insurance fund utilization benefits.

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