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RESEARCH ON GENDER DIFFERENCES IN THE MULTIDIMENSIONAL POVERTY OF THE ELDERLY

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Abstract
In recent years, the challenge of population aging to economic growth has aroused widespread concern in the society, and the work of the elderly poor to get out of poverty has become a hard bone in China's fight against poverty. Poverty in old age has become an urgent problem to be solved under the background of the times, and China has gradually shown the trend of feminization of old age. Based on the theory of feasible ability poverty, the theory of vulnerability and the cultural foundation of patriarchy, this paper selects the data of the 2018 China Family Panel Studies (CFPS) to measure poverty in old age from a multi-dimensional perspective and explores the relationship between gender and the dimension of poverty in old age. Studies have shown that female elderly groups are less prone to economic poverty than men, but are more likely to fall into health poverty and mental poverty. Based on the results of the research, corresponding reform suggestions are put forward, with a view to providing a basis for the precise management of poverty in the elderly.

Introduction
Since the 21st century, the social economy has developed vigorously, and China's population development has produced significant changes in its internal driving force and external conditions. The growth inertia of the total population size has weakened, and the working-age population has shown a decline in volatility. With the arrival of the Lewis Turning Point, the demographic dividend is gradually disappearing, and the social demographic structure is showing an elderly state. From the perspective of the total population structure, as of the latest data released in 2019, as shown in Figure 1, the proportion of people over 60 years old in mainland China has reached 18.1% of the total population, and the proportion of people over 65 years old has reached 12.6% of the total population. The social role of the elderly determines that they are vulnerable in terms of economic income. They are also a group with a high incidence of various diseases, and their physiological characteristics determine their vulnerability. Due to various factors, the elderly is more susceptible to the impact and distress of poverty. And with economic development and social progress, especially the current phenomenon of population aging, family miniaturization and rural urbanization, the demand for elderly care services will increase. However, when China entered a society with an aging population at the beginning of this century, the accumulation of material wealth was relatively insufficient. With multiple cumulative disadvantages, China presented the characteristics of "getting old before getting rich". The elderly poor are the main poor group, and it is urgent to solve the problem of elderly poverty (Zhong Shuiying, 2015).

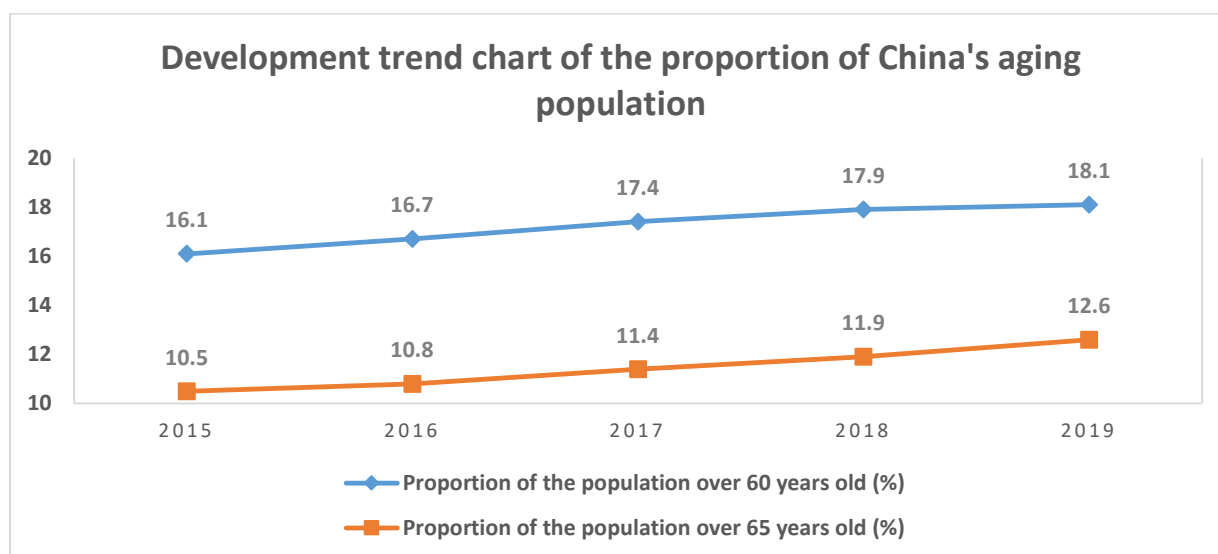# INTERNATIONAL JOURNAL OF RESEARCH SCIENCE & MANAGEMENT

Figure 1:

Fig.1. Development trend chart of the proportion of China's aging population

Data source: National Bureau of Statistics of China

After the 19th National Congress of the Communist Party of China, the Party Central Committee has regarded fighting poverty as one of the three major battles for building a moderately prosperous society in all respects. Targeted poverty alleviation is one of the specific measures formulated to build a moderately prosperous society in all respects. The purpose of China's targeted poverty alleviation strategy is to enable residents of different regions, ages, and genders to get rid of poverty as scheduled. So first, we need to accurately identify the poor. To successfully implement the targeted poverty alleviation policy, it is necessary to emphasize targeting and pertinence and interpret the connotation of multi-dimensional poverty. That is to say, not only measure poverty from the income dimension, but also include education, housing, health, and the availability of public goods to accurately identify poverty in non-income dimensions. In fact, the poverty of the elderly is not only manifested as material poverty but may also be manifested as spiritual or psychological poverty. This multidimensional poverty of the elderly and the aging of the population are intertwined together to describe the basic living conditions of the elderly.

At the same time, as the quality of life continues to improve, so does life expectancy. As shown in Figure 2, the average life expectancy of Chinese women is higher than that of men. Women account for 51% of the elderly over 60 years old, and 68% of the elderly over 90 years old. The proportion of older women in China is higher than that of men, and with the increase of age, the proportion of older women has also increased. In the future, the population size of older women will further increase (Chen Yanmei, 2018), and there will be a gender imbalance among the elderly. Therefore, in the era of aging, the factor of gender cannot be ignored when evaluating the multidimensional poverty of the elderly, which has important practical significance for reducing the multidimensional poverty of the elderly and improving the old-age security mechanism.

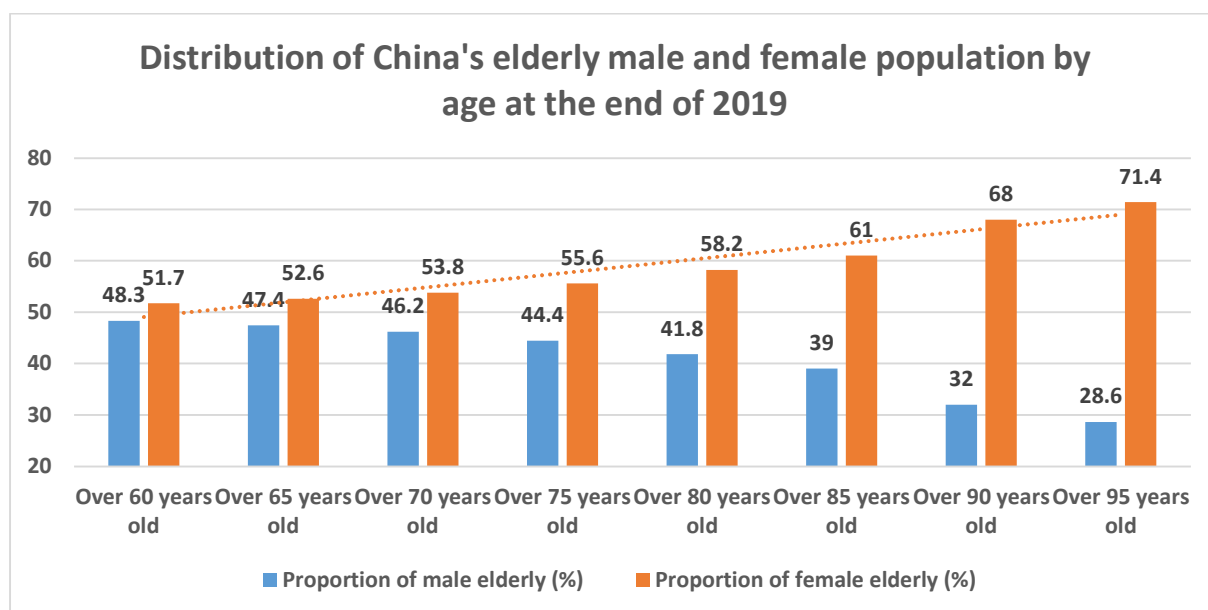INTERNATIONAL JOURNAL OF RESEARCH SCIENCE & MANAGEMENT

Figure 2:

Fig.2. Distribution of China's elderly male and female population by age at the end of 2019

Data source: National Bureau of Statistics of China

In the context of accelerating China's aging trend, this paper uses the 2018 China Family Panel Studies data to analyze the poverty situation of the elderly based on a multi-dimensional perspective of poverty and attempts to explore the relationship between gender and poverty in the elderly. The research in this paper has a certain positive significance for evaluating the evolution of the multidimensional poverty of the elderly and the impact of gender on the poverty of the elderly. At the same time, it can provide a reference for realizing differentiated assistance for elderly poverty and improving the accuracy of poverty alleviation in the future.

Literature review

Poverty is a historical and worldwide socio-economic issue. Poverty and anti-poverty is one of the research hotspots of modern economics. There is a lot of literature in this area. According to the research needs of this paper, it will focus on the connotation of poverty, the multidimensional poverty of the elderly, and the poverty of elderly women.

The connotation of poverty

In terms of the research on the connotation of poverty, scholars at home and abroad have conducted extensive research to define the concept of poverty from different perspectives such as "ability", "social exclusion", and "lack". The overall understanding of poverty has experienced an evolution process from absolute poverty to relative poverty, from income poverty to capacity poverty, and from single-dimensional poverty to multi-dimensional poverty. The World Bank (1990) and Dong Furen (1996) took "lack" as the starting point, and believed that poverty is a behavioral life state caused by the lack of material capital, social activities, policy role participation, psychological and mental health. The United Nations Development Program (UNDP, 1996) inherited and developed Sen's (1976) perspective of poverty from the perspective of "capacity", defining poverty as the deprivation of basic survival and development capabilities. With the advancement of research, capacity poverty has gradually evolved into a part of multidimensional poverty. Sen, as the leader of the multi-dimensional poverty study, put forward the concept of feasibility in 2002, which holds that the nature of poverty is a multi-dimensional and complex phenomenon. Poverty is the deprivation of basic viable human capacity, which leads to inadequate income-generating capacity, access and enjoyment of a normal life. The proposal of capacity poverty can better reflect the essence and connotation of poverty. Based on this view, scholars have gradually expanded poverty measurement from a single measure of income to a multi-dimensional perspective in their research. Feasible capacity poverty not only pays attention to the consideration of income dimension, but also directly regards health, psychology and other factors as a kind of poverty, and comprehensively measures the poverty problem at this stage.

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Multidimensional poverty in the elderly

The aging stage is a necessary stage in the human life cycle. The accumulation of time and experience makes the elderly group have irreplaceable contributions and value in the family and society. As an increasingly large group, old-age poverty has also become an unavoidable problem. Judging from the existing literature, Bai Rui (2013) pointed out that social insurance plays a supporting role in the basic livelihood security of rural elderly groups. Wang Yu et al. (2014) pointed out that the economic conditions, physical health, and psychological conditions of rural elderly people are related to whether they have children, whether they have pensions, and whether they live alone. Jie Wu (2015) indicated in a study that public transfer payments will not only not alleviate the poverty of the rural elderly, but also may aggravate the poverty of the rural elderly. On this basis, he also discussed the urban-rural differences in the impact of multidimensional poverty in the elderly under social insurance. It is believed that in the short term, the labor supply and welfare of the elderly will be limited by China's " New Type Rural Social Insurance Pension", which is a small subsidy external intervention policy. Le Zhang et al. (2016) believe that the economic poverty, health impairment, and mental loneliness of the elderly are affected by family resource endowments and the social welfare system. Liu Yiwei (2017) proposed that improving the social insurance system can solve the problems of elderly economic poverty, health poverty and mental poverty.

The poverty of older women

In the research on poverty of elderly women, American scholar Pearce put forward the concept of "feminization of poverty" in the 1970s, that is, poverty has a feminine face. M·Moghadam also believes that female poverty is more vulnerable, hidden and long-term than male poverty. McNay (2005) and Alkire (2010) believe that there are differences in the perception of poverty among elderly men and women in economic, physical and psychological aspects, and the characteristics of multidimensional poverty are different. Moreover, if the elderly female group loses their spouse to live alone, they will have more economic and mental pressure in their lives, and they will be more prone to multidimensional poverty. In terms of economic security, the property rights of elderly women cannot be effectively protected. At the same time, factors such as extended life expectancy and widowhood have led to a higher poverty rate. In addition, gender inequality is also accumulating in long-term social life. The dual disadvantaged status of old age and women has made the poverty problem of old women more prominent.

To sum up, although the domestic academic circles have paid extensive attention to the poverty of the elderly, most of them focus on the research of rural elderly groups, and only a few scholars have studied the poverty of women. Based on the gender differences in China's population aging and China's urbanization policies, this paper explores the relationship between the elderly groups of different genders and different levels of multidimensional poverty, and analyzes the influencing factors of elderly poverty.

Theoretical analysis

Appropriate theoretical basis is the top priority for research. In order to conduct research more effectively and wisely, this paper elaborates on the selected theoretical basis: social vulnerability theory, multidimensional poverty theory and patriarchal culture.

Social vulnerability theory

The concept of vulnerability originated in the field of natural disasters. After the 1970s, vulnerability research began to extend to the fields of ecosystems, social sciences, geosciences, and sustainable sciences. Due to the sensitivity of the social-ecological system to various internal and external disturbances and the lack of the ability to deal with unfavorable disturbances, a state in which the system tends to develop in an unsustainable direction is a comprehensive reflection of the functional structure of its succession stage. The fragility theory is an unstable state with poor tolerance to internal and external risks caused by the high sensitivity of individuals, organizations, and systems. In the individual's life, old age makes the person physically and psychologically vulnerable (Zhou Limin, 2012). Decreased physical fitness, poor tolerance for disease risks and accidental injuries, mental pressure brought about by social development, lack of social roles, reduced companionship with relatives, and reduced ability to adapt to the external environment these factors will make the elderly feel anxious about the current situation of life, and they are on the verge of collapse.

Multi-dimensional poverty theory

The essence of poverty is the lack and deprivation of basic human abilities. The real meaning of poverty is not only the low income but also the poverty of human abilities, that is, the lack of the ability to live a normal life. Income has only instrumental meaning, it is just a means for us to pursue a happy life that we have reason to

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cherish (Sen, 2002). The concept of multidimensional poverty makes us have a deeper understanding of poverty and poverty alleviation and gives more ethical care to the poor. With the "Human Development Report 2010" as a mark, the concept of multidimensional poverty can be widely disseminated on a global scale. Therefore, the measurement of poverty should not only be based on pure economic standards. Compared with the traditional poverty view, the feasible capability poverty view is a multidimensional poverty view. Its core view is that poverty includes not only income poverty, but also poverty in multiple dimensions such as health, education, housing, social interaction, and rights. Among them, feasible ability refers to "people's ability to do what they want to do and live the life they want to live". It is inaccurate to measure poverty simply by low income. When a person's basic viable abilities are insufficient, normal basic functional activities cannot be realized.

Patriarchy
Patriarchy refers to the dominance of men over women in the family and other social environments (Patricia Ticineto Clough, 1994), and this phenomenon is widespread all over the world. Different ways of existence and cultural backgrounds will reflect different social relationships, but they will all lead to the direct result of "the lack of female subjects". Under China's long-standing traditional concepts, women are constrained by the concept of patriarchy. In a patriarchal society, there are presuppositions of gender roles in social relations. The self-construction of women's social personality is strongly interfered by the outside, and the right to speak is in the hands of men. In the environment where the family and the workplace are separated, men who occupy the main part of economic output and social division of labor have formed a male-centered economic division of labor discrimination. Women are excluded from the economic division of labor, and the relationship between women and family life has become closer. Patriarchy permeates all aspects of economy, society, and ideology. Women cannot realize their self-worth with an equal status in work and life, but become attached to men as a secondary sex.

Therefore, this paper believes that under the patriarchal culture, society constructs different gender roles, and old age is the decline stage in the life cycle of a person. When elderly people of different genders face internal risk disturbances and external risk shocks (such as the decline in physical function, the threat of disease, reduced social participation, low-income ability, etc.), they lack stability and are vulnerable to economic, health and psychological tests. In addition, due to the long-term existence of a patriarchal ideology, in the field of market economy, it is difficult for women to obtain job opportunities due to gender factors, and their income is generally lower than that of men at the same level. In this sex-segregated environment, women have long been disadvantaged at work, and the accumulation of this disadvantage is intertwined with the double disadvantage of age discrimination after entering old age. That is, the possibility of the employment status of "higher men and lower women" and the average life expectancy of "higher women and lower men" (Tan Lin, 2015) may cause gender differences in the degree of injury suffered by the elderly when they are exposed to risk shocks, and present different situations in economic, health, and spiritual aspects.
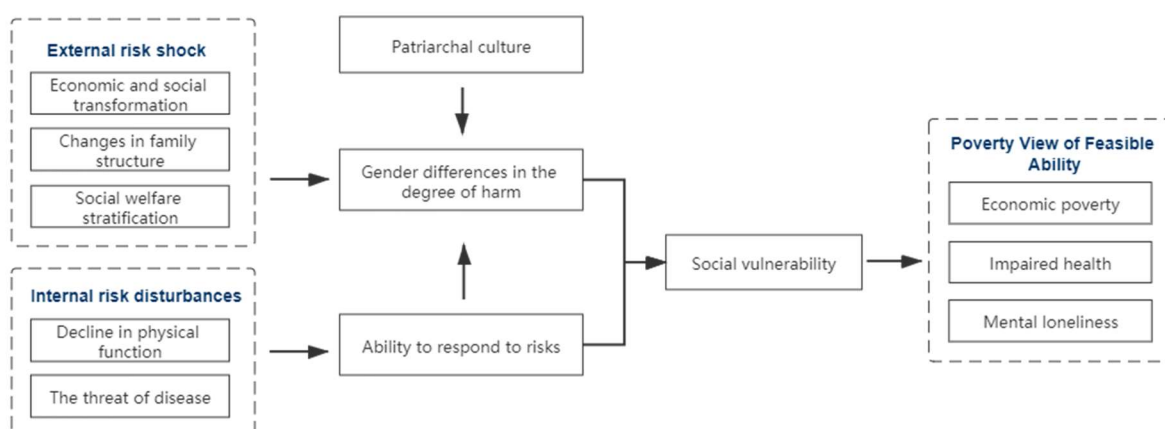
Figure 3:

Fig.3. Diagram of the Mechanism of Multidimensional Poverty among the Elderly

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Research Design

The source of the data

This data is from the 2018 China Family Panel Studies (CFPS). CFPS is a large-scale, comprehensive, academically motivated social tracking survey project designed by the Peking University Research Team, funded by Peking University and the Natural Science Foundation, and run by the Institute of Social Science Survey (ISSS) of Peking University. It collects more comprehensive, high-quality, high-use data that reflect China's social, economic, demographic, educational and health situation and provides a data base for academic research and public policy analysis. A total of 4409 valid samples were obtained after data cleaning.

The description of variables

The explained variable in this paper is poverty in old age, which is measured from three dimensions: economic poverty, health poverty and mental poverty. In the economic dimension, if the annual income of the elderly is less than 4,000 yuan, there will be economic poverty. In terms of health, if the elderly feel physical deterioration based on their original physical functions, they will suffer from health poverty. In the spiritual dimension, due to the flow of youth and the increase of empty-nest elderly, the elderly will feel empty, so the survey respondents chose "I feel lonely" as the measure of mental poverty in the questionnaire.

The explanatory variable is gender, and if the sample is female in the CFPS questionnaire, it is coded 1 and the sample is male with a code of 0.

Studies have been conducted on poverty in the elderly from the perspectives of personal characteristics (such as age, education level, whether or not a spouse, etc.), family endowments (such as number of children, family assets, etc.), and social security (such as endowment insurance, medical insurance, etc.). In order to make the study of the relationship between gender and poverty in old age clearer and reliable, this paper introduces relevant variables at the individual, family and social levels for control (Liu Yipeng, 2018; Liu Yiwei, 2017; Mao Zhonggen, 2013, etc.). The control variables selected age, years of education, number of children, family assets, urban or rural areas, the degree of economic development in the region, whether to have a spouse, whether to receive medical insurance, and whether to receive medical insurance. See Table 1 for specific variable indicators.

Table 1 :

Table 1   Critical Standards and Assignment of Variable Index

variable	The critical criteria for variables	assignment
Economic poverty	The annual income is less than 4000 yuan	No = 0 Yes = 1
Health poverty	The change of physical health is worse	No = 0 Yes = 1
Mental poverty	Often / most of the time / sometimes I feel lonely	No = 0 Yes = 1
Gender	-	Male = 0 Female = 1
Age	-	continuous variable
Years of education	-	continuous variable
With or without spouse	in marriage	No = 0 Yes = 1
Number of children	-	continuous variable
Household assets	-	continuous variable
urban or rural	-	Urban = 0 Rural = 1

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Regional economic development	-	West = 0 Middle = 1 East = 2
Whether to receive endowment insurance	Received endowment insurance	No = 0 Yes = 1
Whether to get medical insurance	Received medical insurance	No = 0 Yes = 1

The setting of the model
As the explained variables in this paper, economic poverty, health poverty and mental poverty are all binary categorical variables, which require nonlinear regression, the Logit model is chosen for binary Logistic analysis. The Logit model can reveal the dependence of the explained variable on the explanatory variable, and express the analysis result as the ratio of a result to the probability of a certain baseline result. In this paper, the negative answer of the selected variable will be used as the baseline, and the following model will be constructed:

$$\ln\left(\frac{P}{1-P}\right) = \beta_0 + \sum_{i=0}^{k} \beta_i X_i + \varepsilon$$

P is the probability of poverty among the elderly;
X_i is an independent variable;
β_i is the parameter coefficient to be estimated for the independent variable;
ε is random error term.

An empirical analysis of the factors leading to poverty in the elderly

Descriptive analysis
From the statistical descriptive analysis in Table 2 and Table 3, it can be seen that from the perspective of economic poverty, more than 70% of the samples in the sample are negative. It can be seen that China's poverty alleviation work has achieved remarkable results, but more than 20% of the population in the sample is still in a state of economic poverty. From the perspective of health poverty, nearly half of the population in the sample has health poverty problems. The distribution of mental poverty in this book also reached 30%. With the development of society, in addition to economic poverty, health and mental poverty alleviation also need attention. The proportion of women in the sample was 51.98 %, with a more balanced ratio of men to women. More than 50% of the sample selected urban, the proportion of rural samples is 40.60%, the proportion of urban and rural areas are also relatively balanced. The samples were 48.61% distributed in the eastern part of China, 31.93% in the central part, and a relatively small sample in the western region. Descriptive analysis of several numerical variables such as age, years of education, number of children, and family assets shows that the maximum value of age and family assets exceeds the average by 3 standard deviations, and the data fluctuates greatly. Relative to the average, the median is more appropriate to describe the overall level. The age of the elderly in the sample is mainly 68 years old, and the length of education is about 6 years. Many people in the group actively responded to the one-child family planning policy implemented by the state in the 1980s, and the median number of children was one. Family assets are distributed positively, with a median of RMB 13,000.

Table 2 :

Table 2   Frequency statistics describes the analysis results

name	option	Frequency	Percentage (%)
Economic poverty	no	3398	77.07
	yes	1011	22.93
Health poverty	no	2308	52.35
	yes	2101	47.65

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Mental poverty	no	3072	69.68
	yes	1337	30.32
Whether to receive endowment insurance	no	1324	30.03
	yes	3085	69.97
Gender	male	2117	48.02
	female	2292	51.98
urban or rural	town	2619	59.40
	rural	1790	40.60
With or without spouse	no	683	15.49
	yes	3726	84.51
Whether to get medical insurance	no	288	6.53
	yes	4121	93.47
Regional economic development	Western Region	858	19.46
	Central region	1408	31.93
	Eastern Region	2143	48.61
total		4409	100.0

Table 3 :

Table 3   Median statistical descriptive analysis results

name	minimum	Maximum	Mean	Standard deviation	Median
Age	45.00	95.00	67.73	7.68	68.00
Years of education	0.00	19.00	5.58	4.80	6.00
Number of children	0.00	8.00	0.84	0.76	1.00
Household assets	0.00	4500000.00	77090.52	214403.42	13000.00

Regression analysis

Use gender as an independent variable. Age, years of education, presence or absence of a spouse, number of children, family assets, urban and rural areas, region, whether to receive endowment insurance, and whether to receive medical insurance as control variables. Economic poverty, health poverty, and mental poverty are used as dependent variables to perform binary Logit regression analysis. From Table 4, it can be seen that there are 4409 samples participating in the analysis, and there is no missing data.

First of all, the overall validity of the model is analyzed, the test results p-value is less than 0.05, indicating that the parameters put into the model are valid, this model construction is meaningful. The Hosmer-Lemeshow goodness of fit test P is greater than 0.05, the model passes the HL test, and the model has good goodness of fit.

In the dimension of economic poverty, the regression coefficient value of gender is -0.205, and it shows a significant level of 0.05, indicating that the gender of women will have a significant negative impact on economic poverty and that the probability of economic poverty among women is 18.5% lower than that of men. In terms of the dimension of health poverty, the regression coefficient of gender is 0.166, and it shows a significant level of 0.05, which means that gender for women will have a significant positive impact on health poverty, and women are 1.181 times more likely to develop health poverty than men. Similarly, in the dimension of mental poverty,

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the regression coefficient value of gender is 0.235, and it shows a significant level of 0.01, showing that gender for women will have a significant positive impact on mental poverty, women are 1.265 times more likely to develop mental poverty than men.

Combined with the above-mentioned regression results, different genders have different effects on poverty in old age that does not pass the dimension. Older groups with women are less likely to develop economic poverty than men, but are more likely to develop health poverty and mental poverty.

The reasons for this are related to consumer demand on the one hand and physiological factors on the other. First, there are gender differences in the consumption levels of the elderly (Mao Zhonggen, 2013). According to the existing research conducted by scholars, the economic needs of the elderly female group are mainly reflected in "food" and "living", and the consumption demand is low. Elderly men also show higher consumption demands than women in terms of "tobacco and alcohol", "interpersonal communication", and "transportation and communication" (Zhu Xuhong, 2012). Although it is in old age, the expenditures for the exchange of favors are still an indispensable part. In the current gender construction and the current life experience of the elderly group, the resources of the elderly women are considered to be acquired by the men, and the family relations are mainly borne by the men. Therefore, in terms of economy, both urban and rural areas show significant differences between males and females. The degree of satisfaction of elderly women with their own economy is higher than that of men. In addition to the lower consumption level of elderly women in the aging stage, the probability of falling into economic poverty is lower than men.

Secondly, the relationship between gender and health poverty is also in line with the "male-female, health-survival paradox." In many countries, older men are healthier than older women, because although women live longer than men, they spend less time in a healthy and good life. Although the time of death is earlier, men are better than women in terms of health. In later life, women are more susceptible to chronic, non-life-threatening diseases, disease-related survival, and poor quality of life and health (C. Ruth Archer, 2018). At the same time, the prevalence of men older than women in marriage and the increased average life expectancy of women make women more likely to face death from family or friends, and women are more likely to develop depressive symptoms as a result of chronic physical illness, reflecting the underlying emotional gender differences (Eileen M, 2011).

In addition, there are differences in the effect of control variables on poverty in old age in different poverty dimensions. Specifically, age is positively related to economic poverty and health poverty. The older the age group, the more likely it is to fall into economic and health poverty, which is consistent with the human life cycle. The elderly are in a period of decline in their lives, their physical functions decline, their vulnerability increases, and they are more likely to face health problems. The burden on the family becomes heavier, and economic poverty will also follow. The number of years of education and family assets has a negative correlation with the elderly's economy, health, and mental poverty. The longer the years of education and the more accumulation of family assets, the lower the probability of poverty in old age. Compared with the elderly without a spouse, the probability of the elderly with a spouse falling into mental poverty is lower. The elderly group living with a spouse is more likely to gain recognition and a sense of belonging, and have better life satisfaction and emotional experience. In addition, the influence of the elderly groups on poverty in the living areas is also different, and the rural elderly groups are in a relatively weak stage in the three dimensions of poverty. The degree of regional economic development is negatively related to the economic and spiritual aspects of the elderly group. The higher the level of economic development, the more likely the accumulation of funds by the families of the elderly groups is to meet their consumption needs, cultural life (e.g., institutions for the elderly, universities for the elderly, etc.) is more perfect, and the elderly groups are more likely to have access to spiritual companionship.

Table 4：

Table 4   Multiple regression analysis of gender and elderly poverty

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term	Economic poverty	Health poverty	Mental poverty
Gender: Female	-0.205 (-2.508*)	0.166 (2.538*)	0.235 (3.262**)
Age	0.018 (3.021**)	0.015 (3.318**)	-0.010 (-2.022*)
Years of education	-0.091 (-9.431**)	-0.051 (-6.917**)	-0.018 (-2.202*)
Spouse: with spouse	0.088 (0.818)	-0.051 (-0.575)	-0.978 (-10.835**)
Number of children	0.055 (1.103)	0.002 (0.041)	-0.052 (-1.123)
Household assets	-0.000 (-4.207**)	-0.000 (-2.320*)	-0.000 (-2.276*)
Urban or rural: Rural	0.979 (11.895**)	0.221 (3.253**)	0.427 (5.738**)
Regional economic development	-0.113 (-2.242*)	-0.045 (-1.077)	-0.179 (-3.965**)
Whether to receive endowment insurance: received	0.145 (1.628)	-0.104 (-1.516)	-0.037 (-0.487)
Whether to receive medical insurance: received	-0.389 (-2.679**)	-0.022 (-0.174)	-0.075 (-0.554)
Likelihood ratio test	χ^2(10)=566.764,p=0.000	χ^2(10)=158.535,p=0.000	χ^2(10)=254.288,p=0.000
Hosmer lemeshow test	χ^2(8)=14.185,p=0.077	χ^2(8)=4.826,p=0.776	χ^2(8)=13.327,p=0.101
McFadden R	0.119	0.026	0.047

*P < 0.05, * * P < 0.01, Z value in brackets

The test of robustness
The robustness test is to consider the non-randomness of sample selection, the selection of variables and the rationality of the model, and to verify whether the selected empirical model can maintain a stable and consistent interpretation when some parameters change, the existing empirical results do not change with the change of parameter setting. In this paper, we choose to replace the indicators of health poverty and mental poverty for the elderly, and select "what do you think of your health status?" "my happiness level of life" to measure health poverty and mental poverty. Among them, the respondents chose "health" to think that health is not poor, the rest of the situation is health poverty. And the respondents chose "I feel happy most of the time" as mentally not poor, and the rest as mentally poor. The robustness test results are basically consistent with Table 4. For the sake of space, the related values of control variables are not shown anymore. That is, the female elderly group has a lower probability of economic poverty than men, but the probability of falling into health poverty and mental poverty is higher than that of men. Regression analysis is robust, and the conclusion is still credible.

Conclusion and suggestion

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Conclusion

Chinese President Xi Jinping put forward the important indicators of seeking truth from facts, adapting measures to local conditions, categorized guidance, and targeted poverty alleviation. At the critical moment of resolutely winning the battle against poverty, solving the poverty problem of the elderly in China under the background of aging also plays an indispensable role in poverty alleviation. From the above discussion and analysis, gender has different effects on multidimensional poverty in the elderly. Women are less likely to face economic poverty than men, but men are less likely to suffer from health poverty and mental poverty than women.

Suggestions

Based on the research conclusions of this paper and the research results of other scholars, this paper believes that in order to solve the multidimensional poverty problem of the elderly, it is necessary to incorporate gender into relevant policy formulation, adhere to gender equality, reduce policy blind spots, and try to improve the multidimensional poverty of the elderly. In terms of policy implications, the first thing to do is to ensure the basic life of the elderly group and provide them with certain living materials as far as possible. While promoting social security, China may consider promoting the overall management of health care for the elderly, using information technology such as "Internet Plus" to establish health records for the elderly, promoting digital medical care (Qin Jing, etc., 2020; Huang Jing, etc., 2020), improving the effectiveness of comprehensive intervention and management of chronic diseases, and reducing the problem of disease survival.

Secondly, in order to achieve targeted poverty alleviation and precise poverty alleviation, gender differences should be considered when focusing on the elderly groups, and the mental poverty problem of elderly and widowed women should be paid attention to. On the one hand, public opinion should be strengthened to create a social atmosphere. In the construction of social meaning, changing the traditional concepts of male superiority, three obedience and four virtues handed down from feudal society, and sending the elderly to nursing homes is the underlying consciousness of unfilial piety (Yan Zhanyou, 2015). The widowed elderly women are affected by the social ideology of the end, confined to the public opinion and lack of spiritual support, even the elderly women should enjoy the right to freedom of marriage.

Finally, family old-age care is the traditional way of old-age care in China, but in the rapid economic development of society, children for the elderly companionship is limited, family old-age care to a certain extent cannot meet the needs of the elderly. China's pension institutions have transformed from a "combination of medical care and nursing" to a "combination of medical care and education", institutional elderly care can also effectively pay attention to the physical and mental health of the elderly. Therefore, institutional elderly care is also a new type of elderly care in line with China's national conditions, helping children to achieve the saying that "while his parents are living, a son should not go far abroad; if he does, he should let them know where he goes." Therefore, it is necessary to strengthen carrier construction and build a service platform. The civil affairs, women's federations, and aging management departments should take the initiative to find out the basic situation and needs of the local elderly groups, establish a database, and earnestly seek benefits for the elderly groups. At the same time, in terms of the investment of pension funds, the management and operation of the pension industry, a sound regulatory standard shall be established to eliminate face projects and image projects (Huang Yao, 2020). It is necessary to build a safety net for the economic, health and spiritual stability of the elderly, so as to truly enable the elderly to "feel secure, happy and dependent."

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