

ORIGINAL RESEARCH ARTICLE

The Impact of the New Rural Social Pension Insurance on the Happiness of Rural Residents in the Context of Population Aging: An Empirical Study Based on CFPS Data

Long Hai^{1,2}, Yanghao Cui^{1,2}, Rui Wang^{1,2}

Keywords: Rural; Social Pension Insurance; Happiness; Elderly; Social Policy;

ABSTRACT

Introduction: The accelerating process of urbanization has led to an increasingly serious aging of the population. In this context, “happy old age” has become a hot issue of social concern.

Objectives: This study aims to examine the impact of the New Rural Social Pension on the well-being of rural residents in China. Specifically, it seeks to understand how the implementation of this policy affects life satisfaction, confidence in the future, and overall sense of well-being among rural residents.

Methods: Based on the 2018 and 2020 China Family Panel Studies (CFPS) data, empirical analysis was conducted using Ordinary Least Squares (OLS) and Ordered Probit models. The study also conducted heterogeneity analysis to explore the variability of the impact across different demographic groups.

Results: The findings show that the implementation of the New Rural Social Pension significantly increases rural residents' life satisfaction and level of confidence in the future, thus enhancing their sense of well-being. Additionally, the heterogeneity analysis reveals that younger residents, females, those from eastern and western regions, and married groups benefit more from the New Rural Social Pension.

Conclusion: This study provides empirical evidence for understanding the actual effects of the New Rural Social Security policy. It also offers policy recommendations for further optimizing the rural social security system in China.

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Corresponding Author:

Yanghao Cui
College of Social Affairs, Henan Normal University, Xinxiang, China;
Reserch Center of Social Work & Social Governance Henan Province, Xinxiang, China;
835170509@qq.com

Authors' Affiliations:

¹College of Social Affairs, Henan Normal University, Xinxiang, China;- ²Reserch Center of Social Work & Social Governance Henan Province, Xinxiang, China;

What do we already know about this topic?

Rural elderly people, as a more vulnerable group in China's social security system, have long faced multiple challenges such as a single source of income, scarce medical resources, and weakened family care capacity.

What is the main contribution to Evidence-Based Practice from this article?

This study provides empirical evidence for understanding the actual effects of the New Rural Social Pension Scheme (NRSP) and offers policy recommendations for further optimizing the rural social security system.

What are this research's implications towards health policy?

The research findings hold significant implications for health policy, particularly in the design and optimization of rural social security systems. They highlight the necessity of enhancing pension benefits to strengthen their protective functions and suggest designing tiered and differentiated pension plans based on regional development levels and income disparities, thereby improving the precision and equity of policies.

Authors' Contributions Statement:

Hai Long is responsible for the conceptualization and design of the study. Yanghao Cui and Rui Wang analyzed the data. All authors jointly discussed, drafted, and revised the manuscript. All authors have approved the final version of the manuscript and agree to be accountable for all aspects of the research work.

Introduction

Enhancing the well-being of the people constitutes the ultimate objective of China's institutional reforms and policy formulation. The report from the 19th National Congress of the Communist Party of China emphasizes, "We must continually meet the people's growing needs for a better life". Under this developmental philosophy, improving the quality of life for rural elderly populations has emerged as a crucial issue in achieving social equity and sharing developmental achievements. To address practical challenges such as accelerating rural population aging and weakening family support systems, China implemented the New Rural Pension Scheme (NRSP) in September 2009, subsequently integrating it with the urban residents' pension program in 2014 to establish the unified Urban-Rural Residents' Pension Insurance Program. This system combines individual contributions, collective subsidies, and government funding to provide basic retirement security for rural residents. Recognized as a comprehensive and far-reaching social security initiative, the NRSP is

widely regarded as a vital policy instrument for alleviating elderly poverty, improving quality of life, and promoting intergenerational equity in rural areas. With over a decade of implementation, while the NRSP has effectively safeguarded basic living standards for rural seniors, its impact on enhancing their subjective well-being has become a focal point for both governmental and academic inquiry. Therefore, within the context of population aging, examining the relationship between NRSP policies and rural elderly happiness carries significant practical implications for elucidating the well-being effects of this social security mechanism.

Literature Review

Following the establishment and pilot implementation of the New Rural Pension Scheme (NRSP), domestic scholars have increasingly explored its impact on the well-being of middle-aged and elderly populations. Studies have demonstrated that the Urban-Rural Residents' Pension Insurance Program enhances subjective well-being by providing older adults with relatively stable income

streams, thereby reducing uncertainties and perceived risks associated with future living conditions and reinforcing psychological security (He Y & Zhou Q, 2016) . On one hand, the system functions as an income redistribution mechanism, mitigating the adverse effects of urban-rural and intergroup income disparities on elderly welfare (Wang Y & Long Y, Jiang C P, Xu Q, 2016) . On the other hand, pension income not only safeguards basic livelihood needs but also enhances life satisfaction and social integration among older adults (Ma H & Xi H, 2020) . Furthermore, studies across domestic and international contexts have demonstrated a significant positive correlation between pension systems and older adults' subjective well-being (Pak T Y, 2020; Zhang Z & Zhang J 2015). From an economic perspective, research highlights that pension schemes not only improve economic security for the elderly but also stabilize consumption patterns and enhance labor productivity at the macroeconomic level, thereby indirectly boosting life satisfaction and well-being (Moreno-Herrero D & Salas-Velasco M, Sánchez-Campillo J, 2017; Diener E, 2000). Kim and Hye-Yeon argue that despite its modest benefit levels, basic pension provision positively influences elderly well-being through factors such as economic satisfaction, marital status, familial financial support, employment status, health conditions, limitation in daily activities, gender, and age (Kim H, 2020). Increases in basic pension benefits also contribute measurably to well-being. Hwang, Lee, and Tae-Jin examined the relationship between pension benefit increments and well-being, finding that sustained receipt of basic pensions elevated happiness scores by 3.72–5.14 points compared to non-recipients, with particularly pronounced effects among individuals aged 75 and above (Ding Y, 2020).

Current scholarship predominantly focuses on the economic impacts of the New Rural Pension Scheme (NRSP), while research investigating its well-being effects—particularly studies targeting rural elderly populations—remains limited and inconclusive. Building on prior research, this study employs updated data from the 2018 and 2020 waves of the China Family Panel Studies (CFPS) to analyze the outcomes of the NRSP following its nationwide implementation. This approach addresses limitations in prior studies, such as outdated datasets and incomplete policy coverage constraints, while capturing contemporary socioeconomic conditions. By examining the post-universalization phase of the NRSP, this research provides critical insights into the program's evolving impact on rural residents' welfare.

Theoretical analysis and research hypothesis
At the beginning of the 20th century, Pareto put forward the theory of welfare economics, which was systematically developed in Pigou's welfare economics and established the basis of the theory. He believes that to improve social welfare, we need to increase the total amount of social products while achieving a relatively fair distribution of resources, especially emphasizing the importance of income redistribution for improving the marginal utility of low-income groups (Ng Y. K, 1983). The New Rural Pension Scheme (NRSP), as a pivotal component of China's rural social security system, embodies the principles of efficiency and equity. Through fiscal subsidies and financial assistance, the program provides basic livelihood guarantees for rural elderly populations, effectively alleviating poverty and progressively narrowing the urban-rural disparity in living standards. Simultaneously, the NRSP plays a constructive role in advancing urban-rural integration, mitigating social

stratification, and enhancing societal stability. In addition to the material support, the new rural insurance also enhances the elderly's sense of security by providing a sustainable source of income, thereby improving their life satisfaction.

Based on the foregoing analysis, this study proposes Research Hypothesis 1: The NRSP enhances the subjective well-being of rural residents.

From the perspective of rational choice theory, rural residents weigh personal interests against future benefits when deciding whether to enroll in the scheme. Existing studies indicate that participants generally exhibit higher overall well-being compared to non-participants, partially validating the NRSP's positive impact. However, this effect demonstrates heterogeneity across age cohorts. Since pension disbursements commence at age 60, individuals under 60—despite contributing to the scheme—do not yet receive payouts, resulting in limited immediate improvements in well-being. In contrast, for those aged 60 and above, pension income becomes a critical economic resource, bolstering livelihood security and risk resilience. Consequently, we posit Research Hypothesis 2: The NRSP exerts differential effects on the subjective well-being of rural residents across distinct age groups.

Furthermore, disparities in regional economic development may moderate the NRSP's effectiveness. Residents in economically developed regions generally possess broader enrollment alternatives and higher living expectations, whereas those in less developed areas are more likely to rely on basic pension guarantees. Within the rational choice framework, rural residents tend to select enrollment strategies that maximize utility—a decision-making process closely tied to their regional economic context.

Thus, this study advances Research Hypothesis 3: The NRSP's impact on rural residents' subjective well-being varies significantly across regions with differing economic development levels.

Drawing on Maslow's hierarchy of needs, after fulfilling basic survival requirements, individuals pursue higher-level social belonging and emotional support. Marriage, as a key mechanism for attaining love and belongingness, is recognized as a critical determinant of subjective well-being. Accordingly, this study proposes Research Hypothesis 4: The NRSP differentially influences the subjective well-being of rural residents based on marital status.

Finally, social gender theory emphasizes disparities in resource allocation, societal roles, and policy responsiveness across genders. In traditional rural social structures, men typically bear greater economic responsibilities, while women rely more heavily on social security systems for stable support. Consequently, female participants may experience stronger perceived security and enhanced well-being post-enrollment, whereas men may prioritize the tangible financial returns of pension benefits.

Based on this analysis, we propose Research Hypothesis 5: The NRSP exerts statistically distinct effects on the subjective well-being of rural residents across gender groups.

Research Design

Data Sources

Data for examining the New Rural Pension Scheme's (NRSP) impact on well-being were drawn from the 2018 and 2020 waves of the China Family Panel Studies (CFPS), a nationally representative longitudinal survey administered by the Institute of Social Science Survey (ISSS) at Peking University. The CFPS tracks multidimensional socioeconomic dynamics

across individual, household, and community levels, capturing China's evolving social, economic, demographic, educational, and health landscapes to support academic and policy-related analyses. Its sample spans 25 provinces/municipalities/autonomous regions, targeting approximately 16,000 households, with all household members included as respondents. To mitigate potential endogeneity concerns, this study employs pooled data from both 2018 and 2020 CFPS waves. The analytical sample was refined by excluding individuals with non-agricultural hukou (household registration status), removing variables containing missing values or outliers, and retaining valid observations. The final sample comprises 31,101 observations, including 18,134 from 2018 and 12,967 from 2020.

Variable Selection

Dependent Variable. Building on prior studies, this research employs confidence in the future as a proxy for subjective well-being. The variable is operationalized through the survey question: "How would you rate your confidence level about the future?" Responses are captured on a 5-point Likert scale (1 = "Very unconfident" to 5 = "Very confident").

Core Independent Variable. The focal explanatory variable is participation in the New Rural Pension Scheme (NRSP). This is derived from the survey item: "Which pension insurance programs have you enrolled in?" Respondents selecting option 6 ("New Rural Pension Scheme") are coded as 1, while those enrolled in other programs or uninsured are coded as 0 (dummy variable).

Control Variables. Based on the selection of the above core variables, combined with the completeness and availability of the answers to specific questions in the cfps2018 and cfps2020 databases, this paper selects gender, age and health status as the control items of personal characteristics (Alesina A & Di Tella R, Macculloch R, 2004), education level, number of children and family size as the control items of family, and marital status as the control items of social characteristics (Ye S & Zhang L, Xiao W, 2021). In addition, considering that the impact of the new rural social security policy on the well-being of rural residents may be related to the region of the respondents, this paper adds the regional variable as the control variable. Specific variable definitions are shown in Table 1.

Table 1 Variable definition

Variable		Variable Description	Take a value
Explained variable	Future confidence	The specific question is "how do you evaluate your confidence in the future?"	5-level scale form, marked with 1 to 5 points from low to high, representing "very confident" to "very confident" in turn
Independent variable	Whether to participate in the new rural insurance	Whether the respondents participate in the "new rural social security"	Participation is 1; 0 for not participating
Control variable	Health condition	Respondents' self-rated health status	1. very healthy 2. very healthy 3. relatively healthy 4. general 5. unhealthy
	Gender	Gender of respondents	0 for females; Male 1
	Marital status	Respondents' marital status	0 for unmarried, divorced or widowed; Married 1
	Age	Age of respondents	0-30 years old was 1, 31-40 years old was 2, 41-50 years old was 3, 51-60 years old was 4, 61-70 years old was 5, 71-80 years old was 6, and over 80 years old was 7
	Education level	Education level of respondents	0 for junior high school and below; 1 for senior high school/technical secondary school/technical school/vocational high school; College degree or above: 2
	Region	Respondent's region	2 in the eastern region; 1 in the central region; 0 in the western region

Model setting

The purpose of this study is to explore the impact of the new rural social security on the well-being of rural residents. To this end, we use two different econometric models: ordinary least squares (OLS) model and ordered probit model to ensure the reliability of the results. The benchmark regression model is expressed as:

$$Y_i = \alpha + \beta \cdot \ln \text{insurance}_i + \gamma \cdot X_i + \delta_i$$

Among them, Y_i represents the subjective well-being of the rural elderly. It indicates whether the respondents have participated in the "new rural social insurance", which is the core explanatory variable. X_i stands for control variable. α is the constant term, β is the coefficient

of the core explanatory variable, γ is the coefficient of the control variable, is the random error term.

Descriptive statistics

Table 2 shows the descriptive statistical results of 31101 samples. The average future confidence of respondents is 4.16, which is at a high level; The average self-rated health status was 2.86, and the overall health was good. The average age of the sample was 41.17 years old, the age span was 16 to 92 years old, and the gender distribution was balanced. About

38.54% of them participated in the new rural social security insurance, indicating that there is still room for improvement in policy coverage. The education level is low, with an average of 0.35, mainly concentrated in junior high school and below. The sample covers the eastern, central and western regions, and the mean value of regional variables is 1.09. The average number of family members is 4.47, and the average number of children is 0.80, reflecting the characteristics of multi generational cohabitation.

Table 2 Descriptive statistical analysis

<i>Variable name</i>	<i>Sample size</i>	<i>Average</i>	<i>Standard error</i>	<i>Min</i>	<i>Max</i>
<i>Age</i>	<i>31101</i>	<i>41.1673</i>	<i>14.3300</i>	<i>16</i>	<i>92</i>
<i>Gender.</i>	<i>31101</i>	<i>0.4994</i>	<i>0.5000</i>	<i>0</i>	<i>1</i>
<i>Whether to participate" in the new rural insurance</i>	<i>31101</i>	<i>0.3854</i>	<i>0.4867</i>	<i>0</i>	<i>1</i>
<i>Future confidence</i>	<i>31101</i>	<i>4.1598</i>	<i>0.9349</i>	<i>1</i>	<i>5</i>
<i>Health condition</i>	<i>31101</i>	<i>2.8603</i>	<i>1.2140</i>	<i>1</i>	<i>5</i>
<i>Education level</i>	<i>31101</i>	<i>0.3462</i>	<i>0.6437</i>	<i>0</i>	<i>2</i>
<i>Region</i>	<i>31101</i>	<i>1.0874</i>	<i>0.8514</i>	<i>0</i>	<i>2</i>
<i>Number of family members</i>	<i>31101</i>	<i>4.4720</i>	<i>2.0707</i>	<i>1</i>	<i>21</i>
<i>Number of children</i>	<i>31101</i>	<i>0.8035</i>	<i>1.0312</i>	<i>0</i>	<i>9</i>
<i>Grouping age</i>	<i>31101</i>	<i>2.6304</i>	<i>1.3577</i>	<i>1</i>	<i>7</i>

Empirical analysis of the impact of the new rural social security system on rural residents' well being

Benchmark regression analysis

Table 3 shows the regression analysis results of future confidence, which are estimated by ordered probit model and OLS model respectively. The study found that the residents who participated in the new rural social security insurance had more confidence in the future, indicating that the new rural social security insurance played a positive role in improving the psychological security of the

elderly. Gender variables also show certain differences. Men generally have higher future confidence than women. At the same time, the confidence level of those with poor health and low education level is significantly lower, indicating that physical health and education background are important factors affecting future expectations. In addition, the increase in the number of children is also negatively correlated with future confidence. In contrast,

the impact of family members' number on future confidence is not obvious, while people with good marital status generally show stronger confidence expectations. The comprehensive regression results show that the core variable "whether to participate in the new rural insurance" and the control variables

such as gender, health status, education level, the number of children and marital status have a significant impact on future confidence. It can be confirmed that the research hypothesis 1 is supported by data - the new rural social security system helps to improve the subjective well-being of rural residents.

Table 3 Impact of "new rural social security" on the well-being of rural residents

Variable name	Future confidence	
	Ordered Probit	OLS
Whether to participate in the new rural insurance	0.030** (0.014)	0.029*** (0.011)
Gender	0.035*** (0.013)	0.024** (0.010)
Grouping age	0.018*** (0.006)	0.004 (0.005)
Health condition	-0.213*** (0.006)	-0.170*** (0.005)
Education level	-0.051*** (0.010)	-0.025*** (0.008)
Number of children	-0.014** (0.006)	-0.010** (0.005)
Family members	0.001 (0.003)	0.001 (0.003)
Marital status	0.286*** (0.016)	0.235*** (0.014)
_cons	—	4.444*** (0.023)
cut1	-2.562*** (0.034)	—
cut2	-2.114*** (0.031)	—
cut3	-1.083*** (0.029)	—
cut4	-0.220*** (0.028)	—
Observed value	31101	31101
adj. R ²	—	0.055

Note: * * * is significant at 0.001 level, * * is significant at 0.05 level, * is significant at 0.1 level.

The same applies below.

Robustness test

In order to ensure the robustness of the regression results, the following three methods are used to test, and the results are shown in Table 4.

First, the dependent variable is re assigned and the value of future confidence of the causal variable is reclassified to better verify the robustness of the results. Specifically, if the original variable's answer to "future confidence" is 1 or 2, it will be re assigned to 0; If the answer is 3 or 4 or 5, it is re assigned to 1. Based on this processing, the ordered logit model and binary logit model are used for further analysis, as shown in Table 4. The results show that even if the measurement methods and model settings of dependent variables are changed, the positive impact of the new rural social security insurance on the future confidence of rural residents is still significant, which supports the robustness of the original hypothesis.

Second, reduce control variables. In this paper, the "number of children" is eliminated from the control variables, and OLS and ordered probit regression are performed again. The results showed that the significance and direction of the core variable "whether to participate in the

new rural insurance" were not affected by the adjustment of the control variables, which further verified the reliability of the benchmark regression.

Third, adjust the sample size. To test whether the results are affected by the sample time span, this paper only retains the data of 2020 (n=12967) and re estimates the model. The results show that even if the sample size is reduced to 2020 data, the promotion effect of the new rural insurance on the future confidence of rural residents still exists, which supports the robustness of the original hypothesis.

Through the three robustness tests of dependent variable reclassification, control variable adjustment and sample size reduction, the core explanatory variable "whether to participate in the new rural insurance" has a significant positive impact on the well-being of rural residents, and the direction of the control variable is consistent with the benchmark model. This shows that the conclusion of this paper has high robustness, and provides a reliable basis for the effect evaluation of the new rural social security policy.

Table 4 Robustness test results

Variable name	(1)		(2)		(3)	
	Ordered Probit	Binary logit	Ordered Probit	OLS	Ordered Probit	OLS
Whether to participate in the new rural insurance	0.059** (0.028)	0.128** (0.060)	0.030*** (0.011)	0.030*** (0.011)	0.042* (0.022)	0.039** (0.017)
Gender	-0.027 (0.026)	-0.065 (0.057)	0.024** (0.010)	0.024** (0.010)	0.055*** (0.020)	0.038** (0.016)
Grouping age	-0.089*** (0.011)	-0.174*** (0.023)	0.004 (0.005)	0.004 (0.005)	0.046*** (0.010)	0.027*** (0.008)
Health condition	-0.225*** (0.013)	-0.508*** (0.028)	-0.170*** (0.005)	-0.170*** (0.005)	-0.215*** (0.010)	-0.168*** (0.007)
Education level	0.145*** (0.028)	0.334*** (0.066)	-0.025*** (0.008)	-0.025*** (0.008)	-0.043*** (0.015)	-0.019 (0.012)
Number of children	-0.002 (0.014)	-0.006 (0.031)			-0.025** (0.011)	-0.018** (0.009)
Family members	0.004 (0.007)	0.011 (0.015)	0.000 (0.003)	0.000 (0.003)	0.008 (0.005)	0.006 (0.004)
Marital status	0.266*** (0.034)	0.564*** (0.071)	0.235*** (0.014)	0.235*** (0.014)	0.330*** (0.026)	0.269*** (0.022)
cut1	-2.419*** (0.064)	-4.670*** (0.143)	-2.553*** (0.033)		-2.486*** (0.054)	
cut2			-2.104*** (0.030)		-2.044*** (0.049)	
cut3			-1.074*** (0.028)		-0.969*** (0.046)	
cut4			-0.210*** (0.028)		-0.084* (0.046)	
Observed value	31101	31101	31101	31101	12967	12967

Heterogeneity analysis

In order to more comprehensively evaluate the implementation effect of the new rural social security policy, this paper analyzes the heterogeneity of the subjective well-being of rural residents who participate in the social security insurance, and the specific results are shown in Table 5. The analysis is carried out from four dimensions of age, region, marital status and gender, in order to reveal the differences of different groups' responses to the new rural social security policy.

According to different age classification, the patients under 60 years old were set as the low age group, and the patients over 60 years old were set as the high age group. In terms of future confidence (Table 5), the impact of the new rural social security insurance on the young group is statistically significant, indicating that the implementation of the system has enhanced the group's confidence in

future life. In the elderly group, although the regression coefficient is also positive, it does not reach a significant level, indicating that the role of the new rural insurance in improving the future confidence of this group is relatively weak. Hypothesis 2 is verified that the impact of the new rural social security system on the well-being of rural residents of different ages is different. This difference can be attributed to the difference between the group's expectations of institutional functions and the actual needs. Compared with the elderly group, the younger group is still in the payment stage, and they are more inclined to regard the new rural insurance as an important support for the future old-age security, so they have a stronger sense of security and positive emotions at the level of psychological expectation, thus showing a higher level of subjective well-being.

Table 5 results of different age groups

<i>Variable name</i>	<i>Future confidence</i>	
	<i>Younger group</i>	<i>Elderly group</i>
<i>Whether to participate in the new rural insurance</i>	0.026* (0.015)	0.048 (0.052)
<i>N</i>	28823	2278

China's economic development presents a phenomenon of regional imbalance, so there are also great differences in the situation of new rural social security in different economic development regions. To this end, this paper introduces regional variables for heterogeneity analysis. According to the national economic zone division standard, and combined with the information about "detailed address of current family" in the questionnaire, the respondents

are divided into eastern, central and western regions. Among them, the western region is assigned a value of 0, the central region is 1, and the eastern region is 2. Grouping regression analysis is carried out respectively. The specific results are shown in Table 6. In terms of future confidence, the regression results show that the impact of the new rural social security insurance in the eastern region is the most significant, with a significant level of

1%, indicating that in this region, the new rural social security insurance can effectively enhance the confidence of rural residents in their future lives. The regression coefficient of the western region is also positive, although the degree of influence is slightly low, but it is also statistically significant. In contrast, the impact of the new rural social security system in the central region is not significant, indicating that the effect of this region in improving residents' confidence in the future is relatively limited. In general, these results verify hypothesis 3, that is, there are significant differences in the impact of the new rural social security system on rural residents' well-being in different economic development areas. The

policy effect is more significant in the eastern region because of the better economic foundation and the full implementation of the system; The central and western regions may be affected by factors such as the coverage of the system, the ability of financial support and public awareness, resulting in relatively weak policy implementation. This finding suggests that in the future, in the process of promoting the optimization of the new rural social security policy, we should pay more attention to the balanced development between regions, and improve the quality of system coverage and service level in the central and western regions, so as to achieve broader policy benefits.

Table 6 Results for different regions

<i>Variable name</i>	<i>Future confidence</i>		
	<i>East</i>	<i>Central</i>	<i>West</i>
<i>Whether to participate in the new rural insurance</i>	0.055*** (0.018)	-0.031 (0.021)	0.043** (0.019)
<i>Control variable</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Observed value</i>	12751	8318	10032

In the heterogeneity test of marital status dimension, the results are shown in Table 7. The analysis found that the new rural insurance had a significant positive impact on the future confidence of unmarried groups, while the impact on married groups was not obvious. This shows that the policy effect of the new rural insurance in unmarried groups is more significant, and the mechanism is significantly enhanced. For married groups, marriage not only provides emotional companionship and economic confidence in the future. This difference can be attributed to the social support and mutual assistance brought about by marriage, and the construction of a

relatively stable social support network, which has a strong psychological buffer mechanism in the face of uncertainty in life. In contrast, unmarried groups usually lack stable family support and rely more on institutional security, so it is easier to obtain psychological security and expected confidence from the new rural social security insurance. To sum up, Hypothesis 4 of the study has been verified: there are significant differences in the impact of the new rural social security system on the happiness of rural residents with different marital status. The findings suggest that when improving the old-age security policy in the future, we should fully consider the differences

in demographic characteristics such as individual marital status, promote the construction of a more inclusive social security

system, and pay special attention to the security needs of potential vulnerable groups such as unmarried groups.

Table 7 results of different marital status

<i>Variable name</i>	<i>Future confidence</i>	
	<i>Married</i>	<i>Nnmarried</i>
<i>Whether to participate in the new rural insurance</i>	0.011 (0.016)	0.102*** (0.038)
<i>Observed value</i>	22249	6574

Affected by the differences in physiological structure and traditional concepts, rural men and women have long-term significant differences in the division of social roles and living conditions (Wood W & Eagly A H, 2002). In rural areas, men usually undertake the main tasks of economic support and agricultural production, while women are often responsible for family care and child rearing in addition to participating in labor production. Therefore, women are generally facing higher care pressure than men, and their demand for social security system, especially the old-age insurance system, is also more urgent. In addition, women's life expectancy is usually longer than men's, and their dependence on pension in their later life is relatively high, which may affect the formation mechanism of their subjective well-being. Therefore, this paper grouped the samples of rural residents according to gender to investigate the difference in their sense of well-being after participating in the new rural social security system. The specific results are shown in Table 8. The regression results showed that

in terms of "future confidence", the female group responded more significantly to the new rural social security insurance, indicating that the new rural social security insurance played a more prominent role in improving women's future expectations. In contrast, the effect of improving the well-being of the male group is relatively weak. This finding verifies the research hypothesis 5: there are significant differences in the happiness effect of the new rural social security system in different gender groups. The policy has a stronger psychological protection effect on female groups, which may be due to the fact that women are in a relatively weak position in the social security system and are more dependent on institutional support, thus obtaining a more direct emotional and sense of security improvement from insurance participation. This result also suggests that in the future, more consideration should be given to gender differences in the system design, and the policy preference and support for female groups, especially elderly women, should be strengthened.

Table 8 gender specific results

<i>Variable name</i>	<i>Future confidence</i>	
	<i>Male</i>	<i>Female</i>
<i>Whether to participate in the new rural insurance</i>	0.029* (0.016)	0.031** (0.016)
<i>Observed value</i>	15532	15569

Discussion

In the discussion of the impact of the new rural social endowment insurance on the well-being of rural residents, based on the existing theoretical framework and related research results, this paper uses the CFPS database in 2018 and 2020 to count 31101 valid samples of rural residents, and deeply analyzes the implementation effect of the new rural social endowment insurance policy by introducing control variables such as gender, age, education level and region. The main conclusions are as follows:

(1) At the overall impact level, through the construction of an empirical model for regression analysis, it is found that participating in the new rural social security can significantly improve the life satisfaction and confidence of rural residents in the future, indicating that the new rural social security system plays a positive role in improving the subjective well-being of rural residents.

(2) At the level of heterogeneity impact, further analysis was conducted from the four dimensions of gender, age, region and marital status, and it was found that the impact of the new rural social security policy on different groups was significantly different. Gender analysis shows that the new rural social security system has a more significant role in promoting women's confidence in the future; Regional analysis shows that rural residents in

the eastern and western regions benefit relatively more, while the policy effect in the central region is not obvious; The age analysis found that the impact of the new rural insurance on the future confidence of younger groups was more significant, but the impact on the elderly group was weaker; The results of marital status analysis show that the new rural social insurance has significantly improved the life satisfaction of married groups, and has a significant positive impact on the future confidence of unmarried groups.

(3) At the level of robustness test, this paper uses robustness tests such as dependent variable reclassification, control variable adjustment and sample size reduction to verify the robustness and reliability of the research conclusion.

Conclusion

This study finds that participation in the New Rural Social Pension Scheme (NRSP) can provide elderly individuals with agricultural household registration a basic level of welfare and support. In particular, the pension system offers a relatively stable source of income, helping to reduce uncertainty in their future lives. However, empirical results suggest that the impact of NRSP on improving the subjective well-being of the rural elderly remains limited.

Therefore, future policy improvements should

focus on appropriately increasing pension benefits to enhance their protective function. Additionally, it is advisable to design a tiered and differentiated pension scheme based on regional development levels and income disparities, thereby increasing the policy's

precision and equity. Through institutional enhancement and targeted support, the goal is to effectively improve the subjective well-being and quality of life of the rural elderly, and to continuously advance rural social welfare.
Disclosure statement

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References

- He, Y., & Zhou, Q. (2016). A study on the effect of Chinese new rural pension program on rural subjective well-being. *Insur Stud*, 3, 106-117. doi:10.13497/j.cnki.is.2016.03.010.
- Wang, Y. Z., Long, Y. Q., Jiang, C. P., & Xu, Q. (2016). Research on social security income redistribution effect in China. *Economic Research Journal*, 51(2), 4-15. doi:10.1016/j.chieco.2023.102082.
- Ma, H., & Xi, H. (2020). Income gap, social insurance and improvement of residents' happiness. *Soc Sec Stud*, 1, 86-98. doi: 10.3969/j.issn.1674-4802.2020.01.009.
- Pak, T. Y. (2020). Social protection for happiness? The impact of social pension reform on subjective well-being of the Korean elderly. *Journal of Policy Modeling*, 42(2), 349-366. doi:10.1016/j.jpolmod.2019.12.001.
- Zhang, Z., & Zhang, J. (2015). Social participation and subjective well-being among retirees in China. *Social Indicators Research*, 123, 143-160. doi:10.1007/s11205-014-0728-1.
- Moreno-Herrero, D., Salas-Velasco, M., & Sánchez-Campillo, J. (2017). Individual pension plans in Spain: How expected change in future income and liquidity constraints shape the behavior of households. *Journal of Family and Economic Issues*, 38, 596-613. doi:10.1007/s10834-017-9526-7.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American psychologist*, 55(1), 34. doi:10.1037//0003-066x.55.1.34.
- Kim, H. (2020). The study on the effect of basic pension on subjective well-being of the elderly. *한국노년학*, 40(1), 1-21. doi:10.31888/jkgs.2020.40.1.1.
- Ding, Y. (2017). Personal life satisfaction of China's rural elderly: Effect of the New Rural Pension Programme. *Journal of International Development*, 29(1), 52-66. doi:10.1002/jid.3264.
- Ng, Y. K. (1983). *Welfare economics* (p. 20). London: Macmillan. doi:10.1093/oso/9780198281191.003.0007.
- Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Inequality and happiness: are Europeans and Americans different?. *Journal of public economics*, 88(9-10), 2009-2042. doi:10.3386/w8198.
- Ye, S., Zhang, L., & Xiao, W. (2021). Study on Influencing Factors of Rural Home-based Pension Happiness: Based on the investigation of the old-age care model of "Party Building+ Home for Care" in Xinyu City, Jiangxi Province. *JOURNAL OF SIMULATION*, 9(1), 9-11. doi:10.26689/ssr.v4i3.3647.
- Wood, W., & Eagly, A. H. (2002). A cross-cultural analysis of the behavior of women and men: implications for the origins of sex differences. *Psychological bulletin*, 128(5), 699. doi:10.1037//0033-2909.128.5.699.