Will Social Participation Make Retirees Happier?
An Empirical Study About Retirement Life in China

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How elderlies participate in social activities is a key issue in coping with aging and has an important impact on elderlies' well-being. This paper examines the effects of different social participation patterns on the happiness of the elderlies in China. The empirical analysis was conducted based on the data from the China Household Finance Survey (CHFS) in 2015. The research results show that compared with reemployment after retirement, community governance is a more common way for retired people to be involved in social activities. We found that reemployment significantly reduces the happiness degree of the retired. Furthermore, this negative effect is more significant in samples without a formal labor contract, relatively lower education level, & senior retired people. In contrast, participating in community governance can significantly improve the happiness level of retirees, which is more essential in the sample of the medium education level and junior retirees.

Keywords: aging, reemployment after retirement, community governance, happiness

INTRODUCTION

In China, the aging problem has been accelerating more and more quickly and severely. According to the World Bank data, by 2022, the population aged 65 and over accounted for 14% of the Chinese population, exceeding the world average of 10%. In an aging society, the way in which older people participate in society is a key issue in coping with aging and has an important impact on their well-being.

Most of the existing literature about influencing factors of well-being focuses on the whole age group, for example, the aspects of income (Muller and Trannoy 2011), demographic difference (Demir and Özdemir 2010; Helliwell 2003) , institutional environment (Ram 2009), & natural environment (Rehdanz and Maddison 2005; Levinson 2012). Apparently, existing research about well-being lack of concerns with age heterogeneity. Retiring from labor market is a milestone event for elderly people, which significantly affects well-being. However, existing research missed the potential impact from social participation, which could be an alternative to employment to enhance the well-being of the retired population.

The Theory of Separation (Cumming et al. (1960) and the Theory of Continuity (Atchley 1989) explain the necessity of social participation from a theoretical point of view. But there is no consistent conclusion. In terms of the role of social participation of the elderly, studies are conducted from the perspectives of the impact on the physical and mental health of the elderly (Ding, Berry, & O'Brien 2015; Bourassa et al.

(2017) and the effect on their economic conditions (Jones et al. (2023). Hence, there is a lack of literature on the impact of social participation on the well-being of the elderly. Simultaneously, the existing research on social participation often focuses on a specific activity, rarely considering the diversity and differences in elderly social participation. From the data view, most of the research on the social participation of the elderly uses the survey data of a province-level in China, which is hard to represent the whole country.

Compared with the existing literature, the contribution of this paper may be reflected in the following four aspects. Firstly, this paper analyzed the elderly's well-being from a new view of the retired elderly's social participation and innovatively distinguished the impact of different social participation modes on their well-being. Secondly, from an empirical point of view, it was the first time to use the family microdata to testify the impact of different social participation modes on the well-being of the elderly in China. Thirdly, we also discussed the different impacts from social participations on various groups of retired people's well-being and the reasons behind it. Finally, it provided a new micro basis for the government to respond to the aging policy actively.

The remaining of the paper are as follows: the second part is the research hypothesis, the third part is the econometric model, data, & variable description; the fourth part is the empirical analysis, & finally the conclusion and policy enlightenment is the last part.

RESEARCH HYPOTHESIS

Social participation of the elderly may have the following two effects on well-being: the promotion effect and the inhibition effect.

From the perspective of the promotion effect, the crucial mechanisms are as follows: (1) For elderlies, one of the essential ways to demonstrate their social value is social participation (Jones et al. (2023), which has a neglectable positive impact on their socialization (Zhang and Zhang 2015). (2) Participation in social activities can alleviate the deterioration of physical and psychological functions for the elderlies (Hwang, Park, & Kim 2018). Social participation positively impacts their physical and mental health, from the evidence of Japan (Tomioka, Kurumatani, & Hosoi 2017) and South Korea (Hwang, Park, & Kim 2018). (3) The traditional utility theory said that income was one of the factors influencing happiness. Social participation can increase the disposable income of the elderlies and reduce the burden of financial support (Shen et al. (2022) to improve their happiness.

Secondly, from the perspective of the inhibition effect, overloaded or unsuitable leisure activities easily generate negative emotions such as boredom, frustration, & loneliness (Murphy 2003), which is not conducive to improving the well-being of the elderly. On the other hand, the impact of income on well-being could be negative under some circumstance. Some high-income jobs may require long working hours (Bick, Fuchs-Schündeln, & Lagakos 2018) and a harmful working environment (Muller and Trannoy 2011), which will also reduce well-being significantly. Therefore, it is possible that social participation could harm the well-being of the elderlies. Meanwhile, the positive and negative effects of social participation on the well-being of the elderly may offset each other, showing a neutral effect.

Based on the above comprehensive analysis, there are three hypothesis about the impact of social participation on the well-being of the elderly. If the promotion effects are greater, social participation will positively impact the well-being of the elderlies. If the inhibition effects are higher, social participation will be negatively related with the elderlies' well-being. Suppose the promotion effects and the inhabitation effects are the same. In that case, the impact from social participation will be cancel out and has no significant influence on the well-being of the elderlies.

Different types of social participation have diverse and various characteristics, so the impact on the well-being of the elderly may also vary. This paper focuses on the positive and negative effects from reemployment after retirement and community governance.

Employment is a critical way to obtain income, social identity, & personal development (Dolan, Peasgood, & White 2008), generally contributing to improving well-being. However, for the retired elderlies, the work intensity may not suit the physical conditions of the elderly. Most of the reemployment positions are temporary work without a labor contract, which may hurt workers' remuneration. Informal

employees usually have no labor contract guarantee and face greater job instability and unemployment risk (Dawson, Veliziotis, & Hopkins 2017). Therefore, self-evaluated health and job instability significantly negatively affect life satisfaction and happiness (Angner et al. (2009; Carr and Chung 2014).

From the perspective of community governance, community management could positively affect the subjective well-being of the elderly regarding social identity and personal development (Keyes and Magyar-Moe 2003). Compared with a contracted and formal employment, community management has the characteristics of flexible working hours, low work intensity, & a high matching degree between work content and the retired elderly's interest. Therefore, the negative impact on the physical condition of the elderly from participation in community management is less than that from a formal employment. However, participating in community management could possibility increase elderlies' labor and time contribution. The elderlies also possibility come across internal conflicts, residents' complaints and dissatisfaction, which will undoubtedly affect the residential well-being. Therefore, participating in community governance possibly has both positive and negative effects on the well-being of the retired elderlies.

The two categories of social participation, reemployment after retirement and community governance, give rise to six research hypotheses as follow:

(1) Elderly individuals, who engaged in reemployment after retirement, may experience relatively higher levels of happiness.
(2) Elderly individuals, participating in reemployment after retirement, also possibly exhibit relatively lower levels of happiness.
(3) There exists no statistically significant difference in the happiness levels of elderly individuals, whether or not they engage in reemployment.
(4) The well-being of elderly individuals involved in community governance is comparatively higher.
(5) The well-being of elderly individuals engaged in community governance is comparatively lower.
(6) There is no statistically significant disparity in the well-being of elderly individuals with or without community governance participation.

The above research hypotheses and further heterogeneity analysis need to be tested through empirical research.

MODEL, DATA, & VARIABLE DESCRIPTION

Combined with the factors summarized above that affect the happiness of the elderly, as well as the influence factors of social participation focused in this paper, the following empirical model is established to test the impact of social participation on the happiness of the elderly:

$$happiness_i = \beta_1 social_i + \beta_2 X_i + \varepsilon_i \qquad (1)$$

Among them, $happiness_i$ is the subjective well-being of an individual i. $social_i$ is the type of social participation of individual i, including reemployment after retirement and participation in community , X_i is other control variables that may affect well-being, & ε_i is the disturbance term.

The data of this paper comes from the 2015 survey data of the China Household Finance Survey (CHFS), which provides a wealth of family level data in China. (2015 CHFS survey samples were distributed in 29 provinces (cities, districts), 363 counties, & 1,439 rural village (neighborhood) committees, with 40,000 valid samples. The survey database contains variables, such as household income, assets, consumption, subjective attitudes, demographic characteristics, etc.

Happiness is set as a subjective dummy variable, & evaluated according to the respondents' answers to the CHFS questionnaire. The question is In general, do you feel happy now? If the respondents answered, very happy or happy, happiness will be set as 1. Happiness is 0 for the rest of other answers, including general, unhappy, & very unhappy.

The social participation discussed in this paper includes the following two types according to the discussion in part 2: reemployment after retirement and participation in community governance.

Our research only includes urban retirees from private and public sectors for reemployment after retirement. Considering most rural families are engaged in economic activities related to agricultural production, & the boundary of employment is relatively vague, this paper takes the retired interviewees of urban families as the research object. Similarly, it is difficult to clearly define the retirement boundary for free occupation, self-employed or private enterprise, self-employed, online shop, & other types of work involved in the questionnaire. So, we did not include the respondents of the above types of work. The reemployment after retirement, a dummy variable, is set as 1 for the respondents who still participate in the non-above types of work after reaching or exceeding the legal retirement age, & 0 for otherwise.

For community governance engagement, we used the following indicators of different dimensions measure community governance participation. Firstly, we set up a dummy variable of willingness to participate in community management. In the CHFS A questionnaire, there's a question asking, Do you have the willingness to participate in community management? So, the variable is set to 1 when the answer is yes and to 0 for no. Secondly, we need to find a dummy variable of the degree of community governance. In the CHFS B questionnaire, there's a question asking, Have your suggestions for the community been accepted by the community government? The variable is 1 if the answer is yes or no. If no suggestion is given in the response, the variable is taken as 0.

Meanwhile, we construct two additional dummy variables to reflect whether the community governance suggestions are adopted. if the answer is yes for the question from CHFS B questionnaire, the first additional dummy variable is 1, & 0 otherwise. If the answer is no, the second additional dummy variable is 1, & 0 otherwise.

According to the previous research results, this paper takes the following variables as the control variables of happiness: (1) Family financial characteristics. This variable group includes annual family income, family assets, whether the family has debt, & the total number of family members. (2) Demographic characteristics. The variable group includes the interviewees' gender, age, the square term of age, education level, & health status (in comparison with the peers, the physical condition of the respondents was 1 for very good, good and ok, 0 for bad and very bad), whether they are CPC party members, & marital status (1 for married or cohabitation, 0 for unmarried, separated, divorced and widowed). (3) Dummy variables of provinces to control the impact of the natural environment and policy environment.

The following Table 1 reports descriptive statistics of the variables involved in this paper. There are about 70% of the retired people expressing they are happy. Around 4% of the retired people choose to be reemployed, which means that reemployment is not the primary way for the retired people to participate in society in this survey. Among them, the proportion of reemployment with the formal labor contract is 2%. The ratio of reemployment with temporary work, & reemployment without a labor contract is 2%. Regarding community management, about 35% of the retired elderlies in Questionnaire A indicated their willingness to participate in community management; 30% of the retired elderlies in Questionnaire B have participated in community governance. 17% of the retired elderlies' community recommendations have been adopted; 13% of retired elderlies' community recommendations have not been adopted. Moreover, the proportion of retirees participating in community management is larger than that of reemployment after retirement. In the family economic characteristics, the average value of family assets is 1,193,280 CNY (approximately 166,000 USD), & the average value of annual income is 78,811.2 CNY[1] (approximately 11,000 USD). Besides, about 11% of the families are in debt. The average family size is 3. In the demographic characteristics of the respondents, the proportion of women is about 58%, the average age of the respondents is 68 years old, 80% are married or cohabiting, & about 13% are CPC party members. The ratio of those with education below high school is the largest, accounting for 60%. It is also shown in Table 1 that about 36% of respondents think they are in better health than their peers.

TABLE 1
DESCRIPTIVE STATISTICS OF MAIN VARIABLES

Variable	Number of observations	Mean	Standard deviation	Min	Max
Whether happiness	6045	0.7	0.46	0	1
reemployment after retirement	5887	0.04	0.2	0	1
Reemployment of formal labor contract	5887	0.02	0.13	0	1
Reemployment of temporary work	5887	0.02	0.15	0	1
Willingness to participate in community management	2937	0.35	0.48	0	1
Participate in community management	3077	0.3	0.46	0	1
Community recommendations adopted	3077	0.17	0.37	0	1
Community recommendations not adopted	3077	0.13	0.34	0	1
Family assets	6057	1193280	1924682	96.8	42500000
Annual family income	6057	78811.2	145853.6	-140000	3046000
The family is in debt	6057	0.11	0.31	0	1
Total number of family members	6057	2.98	1.72	1	12
The interviewee is female	6057	0.58	0.49	0	1
Age of respondents	6057	68.07	7.83	56	86
Square of respondents' age	6057	4695.39	1101.02	3136	7396
Interviewee's education background is below high school	6055	0.6	0.49	0	1
Interviewee's education background is a high school or above and below bachelor's degree	6055	0.33	0.47	0	1
Do respondents think their health status are better than their peers	6057	0.36	0.48	0	1
The interviewee is a party member	6051	0.13	0.34	0	1
The respondent is married or cohabiting	6053	0.8	0.4	0	1

Source: 2015 survey data of the China Household Finance Survey (CHFS)

SOCIAL PARTICIPATION AND HAPPINESS OF RETIRED ELDERLIES: AN EMPIRICAL ANALYSIS

The Relationship Between Reemployment and the Happiness of Retired Elderlies

The explanatory variables in the econometric model are binary dummy variables, so the Probit model is used for regression tests and heterogeneity analysis.

TABLE 2
THE INFLUENCE OF REEMPLOYMENT AFTER RETIREMENT ON HAPPINESS

Dependent Variable: Happiness	(1)	(2)	(3)
Reemployment after retirement	-0.0819***	-0.0675**	-0.0690**
	(0.0294)	(0.0298)	(0.0299)
ln (family assets)		0.0180***	0.0218***
		(0.0037)	(0.0040)
ln (annual household income)		0.0446*	0.0511*
		(0.0231)	(0.0266)
The family is in debt		-0.0958***	-0.1000***
		(0.0183)	(0.0182)
Total number of family members		-0.0033	-0.0024
		(0.0036)	(0.0036)
The interviewee is a female		0.0321**	0.0297**
		(0.0130)	(0.0130)
Age of respondents		-0.0010	-0.0038
		(0.0133)	(0.0133)
Square of respondents' age		$5.52*10^{-5}$	$7.67*10^{-5}$
		$(9.45*10^{-5})$	$(9.47*10^{-5})$
Interviewee's education background is below high school		0.0283	0.0333
		(0.0250)	(0.0252)
Interviewee's education background is between high school and bachelor's degree		0.0439*	0.0480*
		(0.0254)	(0.0254)
The interviewee health status		0.1890***	0.1880***
		(0.0121)	(0.0121)
The interviewee is a party member		0.0168	0.0154
		(0.0180)	(0.0181)
The respondent is married or cohabiting		0.0442***	0.0416***
		(0.0155)	(0.0156)
Province dummy variable	No	No	Yes
Sample size	5,876	5,865	5,865

Note: * *, *, & * are significant at the level of 1%, 5% and 10%, respectively. The coefficient in the table is the average marginal effect.

From Columns (1) to (3) in Table 2, older adults who are reemployed after retirement significantly reduce the probability of happiness. The possible reason is that for the retired elderlies, the positive impact of social status/position, social identity, & personal development is lower than the negative effects of physical overdraft or powerless frustration. After controlling the family economic factors, the demographic factors of the respondents, & the dummy variables of the province, the result is statistically significant at the 5% statistical level. Therefore, the probability of happiness of the reemployed respondents after retirement is significantly reduced by 6.9%.

The analysis results of other control variables is consistent with the conclusion of the existing literature. Regarding family economic factors, the increase in family assets and family income significantly improves the probability of the subjective well-being of retired older adults. Meanwhile, family debt significantly reduces the likelihood of subjective well-being. Therefore, family income is an essential factor affecting

the well-being of retirees. The influence of family size on happiness is not significant. Regarding the demographic factors, the respondents who were female, self-assessed healthy, & married or cohabiting marriage, significantly increased the probability of subjective well-being. The influence of age, educational background, & Party membership on happiness are not significant.

TABLE 3
HETEROGENEIY ANALYSIS OF THE INFLUENCE OF REEMPLOYMENT ON HAPPINESS

Dependent Variable: Happiness	(1) Full sample	(2) Lower than high school degree	(3) Between a high school degree and a bachelor's degree	(4) Higher than a bachelor's degree	(5) Retired within 5 years	(6) Retired over 5 years
Reemployment after retirement		-0.0944**	-0.0045	-0.0863	-0.0594	-0.1040**
		(0.0385)	(0.0546)	(0.1020)	(0.0377)	(0.0528)
Sign a formal labor contract	-0.0152					
	(0.0464)					
Temporary work	-0.1170***					
	(0.0432)					
Control variables of family economic factors	controlled	controlled	controlled	controlled	controlled	controlled
Control variables of a demographic of respondents	controlled	controlled	controlled	controlled	controlled	controlled
Province dummy variable	controlled	controlled	controlled	controlled	controlled	controlled
Sample size	5,865	3,519	1,939	393	1,714	4,151

Note: * *, *, & * are significant at the level of 1%, 5% and 10%, respectively. The coefficient in the table is the average marginal effect.

We also analyzed the heterogeneity of reemployment on elderlies' happiness based on reemployment type, education level, & the age. Table 3 illustrated the heterogeneity analysis of the reemployment type. Column (1) distinguishes three types of reemployment work after retirement: no reemployment after retirement, reemployment work after retirement with a formal contract, & reemployment after retirement without a formal contract. Column (1) shows that compared with the elderly who do not participate in reemployment after retirement, the probability of happiness of those who participate in reemployment without a formal contract will be significantly reduced by 11.7%. The probability of happiness of those reemployed with a formal contract is not significantly influenced. This result is similar to the conclusion that unstable work can reduce happiness (Carr and Chung 2014; Dawson, Veliziotis, & Hopkins 2017).

Most temporary jobs hiring the elderlies belong to the low-class category, such as security staff and cleaning staff. In contrast, the work with a formal contract and hiring retirees is mostly a job type that requires high professional skills, such as teachers and doctors. These two types of work are significantly

different in terms of salary, working environment, & social status. Temporary jobs in China usually comes with low salary, long working time, & harsh environment, etc. These factors reduce the positive impact of reemployment and further reduce the well-being of retirees who participate in temporary positions.

Columns (2) to (4) in Table 3 are heterogeneity analyses based on the different education levels of the respondents. From these results, the negative impact of reemployment on happiness is only significant in the low-education group whose education background is below high school. The probability of happiness is reduced by 9.4% at the 5% significant level. According to the labor market principles in China, retirees with low education level is more likely to be hired as temporary employees without a formal labor contract after retirement, comparing with elderlies with high education level. The instability and the possibility of overdrafts in temporary work will reduce their happiness.

Columns (5) to (6) in Table 3 show the differences in samples from different age groups. Specifically, the respondents who have reached the legal retirement age are divided into two groups: those who have retired within 5 years and those who have retired exceeding 5 years. According to the results, reemployment's negative effect after retirement is insignificant in younger retirees who retired within 5 years. Only for the group who have retired 5 years, the probability of happiness is significantly reduced by 10.4%. With the further decline of physical function due to aging, the physical discomfort caused by reemployment got intensified, which makes the further negative impact of reemployment on happiness in the older group. Meanwhile, this result also means that implementing the policy of delaying retirement in China will not significantly impact the happiness of the above-mentioned younger retirees.

Based on the above regression results, social participation in reemployment significantly reduced the happiness of the retired elderlies. For the retired elderlies, the positive impacts of social identity and personal development from reemployment are lower than the negative effects of physical exhaustion or incompetence. This negative impact is significant when retirees are hired for temporary work without a formal labor contract, retirees' education level are below high school, & the elderlies are retired over 5 years. Meanwhile, reemployment with formal labor contracts and the reemployment of relatively younger retirees (retired within 5 years) have no significant negative impact on happiness. Besides, the results also discovers that reemployment after retirement with a high school and above education background will not significantly reduce the satisfaction and well-beings of the elderly. In another word, it is important to encourage and support the elderly with professional background and capability to be reemployed after retirement.

Community Management and Happiness of Retired Elderlies

Comparing with reemployment after retirement, it is more operational and common for the retired elderly to participate in community management or governance in China. According to the data described above, about 30% of retired older adults were willing to be or had already involved in community management, which is way more than 4% of the retirees participate in society through reemployment. In the following regression, the willingness to join community management and participate in community management are binary dummy variables. So, we will use the Probit model to study how community management affects the happiness of the retired elderlies.

TABLE 4
THE INFLUENCE OF COMMUNITY MANAGEMENT ON THE HAPPINESS OF RETIRED ELDERLIES

Dependent Variable: Happiness	(1)	(2)	(3)
The willingness of community management	0.0445**		
	(0.0176)		
Participate in community management		0.0580***	
		(0.0182)	
Community recommendations adopted			0.1070***
			(0.0206)
Community recommendations not adopted			-0.0025
			(0.0249)
ln (family assets)	0.0270***	0.0143***	0.0141**
	(0.0056)	(0.0055)	(0.0055)
ln (annual household income)	0.1340***	0.0474	0.0444
	(0.0392)	(0.0346)	(0.0345)
The family is in debt	-0.0942***	-0.1260***	-0.1250***
	(0.0259)	(0.0242)	(0.0242)
Total number of family members	-0.0092*	0.0008	0.0017
	(0.0048)	(0.0050)	(0.0049)
The respondent is female	0.0338*	0.0368**	0.0331*
	(0.0182)	(0.0182)	(0.0182)
Age of respondents	-0.0082	-0.0029	-0.0054
	(0.0183)	(0.0189)	(0.0187)
Square of respondents' age	0.0001	7.14×10^{-5}	8.82×10^{-5}
	(0.0001)	(0.0001)	(0.0001)
Interviewee's education background is below high school	0.0244	0.0489	0.0470
	(0.0361)	(0.0353)	(0.0351)
Interviewee's education background is between high school and bachelor's degree	0.0450	0.0430	0.0408
	(0.0365)	(0.0358)	(0.0356)
The health status of interviewee	0.201***	0.172***	0.169***
	(0.0169)	(0.0168)	(0.0168)
The interviewee is a party member	0.0286	0.0116	0.0080
	(0.0261)	(0.0249)	(0.0248)
The respondents are married or cohabiting	0.0202	0.0613***	0.0605***
	(0.0219)	(0.0215)	(0.0214)
Province dummy variable	yes	yes	yes
Sample size	2,926	3,065	3,065

Note: * *, *, & * are significant at the level of 1%, 5% and 10%, respectively. The coefficient in the table is the average marginal effect.

The results of Table 4 Columns (1) to (3) used three dimensions to measure the impact of retirees' participation in community management on their happiness. Column (1) shows the influence of the willingness to participate in community management on the happiness of the retired elderlies. The probability of the happiness of the retired elderlies who desire to participate in community management increased by 4.5%, which was significant at the 5% significant level. This means that the subjective willingness to join community management may improve the probability of the retirees' happiness, whether their suggestions were conductive or not. The possible reason is that the social value of retired older adults can hardly be recognized after retirement. Having community management willingness allows the elderly to achieve their unmet social value and self-realization needs in a low-cost way, which possibly may improve their happiness level. Column (2) reports that the retired elderlies who participated in community management and made suggestions for community management, whether their recommendations were adopted or not, significantly increased the probability of their subjective well-being by 5.8%, which was significant at the 1% significant. Column (3) further divided the influence of whether the community management suggestions were adopted or not on the happiness of the retired elderlies. The results showed that compared with the retired elderlies who did not propose the community management suggestions, the probability of the happiness of the retired elderlies whose recommendations were adopted was significantly increased by 10.7% at 1% significant level. Meanwhile, the happiness of the retired elderlies whose recommendations are not adopted is not significantly decreased. Through the above results, we can find that participating in community management can significantly improve the happiness of retired elderlies, especially when their suggestions are adopted. As an essential way to recognize their social value, community management can improve their subjective well-being by meeting their social respect, & self-recognition needs, which are challenging to be achieved after retirement.

TABLE 5
HETEROGENEITY ANALYSIS OF THE EFFECT OF COMMUNITY MANAGEMENT ON THE HAPPINESS OF RETIRED ELDERLIES

Dependent Variable: Happiness	(1) Lower than high school degree	(2) Between a high school degree and a bachelor's degree	(3) Higher than a bachelor's degree	(4) Retired within 5 years	(5) Retired over 5 years
Participate in community management	0.0469**	0.1030***	0.0231	0.0709**	0.0519**
	(0.0238)	(0.0310)	(0.0737)	(0.0350)	(0.0211)
Control variables of family economic factors	controlled	controlled	controlled	controlled	controlled
Control variables of a demographic of respondents	controlled	controlled	controlled	controlled	controlled
Province dummy variable	controlled	controlled	controlled	controlled	controlled
Sample size	1,863	1,001	174	926	2,139

Note: * *, *, & * are significant at the level of 1%, 5% and 10%, respectively. The coefficient in the table is the average marginal effect.

Columns (1) to (5) in Table 5 are heterogeneity analyses of the effect of different education levels and age on the well-being of retired older adults participating in community management. It can be seen from Columns (1) to (3) that community management participation significantly improved the happiness probability of retirees with an educational degree below the university level. The average marginal effects of the sample groups with an academic degree below the high school level and an educational degree between the high school and university level were 4.7% (statistically significant at 5% level) and 10.3% (statistically significant at 1% level), respectively. However, for the sample group with a college degree or above, the effect of participating in community management on happiness is not significant. Combined with the history of education reform in China, at present, retirees with college degrees or above were mostly engaged in industries with higher knowledge or technical requirements before retirement, such as engineers, teachers, civil servants, etc. Those types of work can still provide social recognition and value after retirement, so community management is not the most crucial channel to improve their happiness. For retirees without a college degree, the way of social participation is relatively limited. As a low-cost involvement, community management could be the leading way for these retirees to achieve social value. Participation in community management can significantly improve their well-being.

Columns (4) to (5) in Table 5 show the influence of different age groups' participation in community management on their well-being, which can also be used as a robustness test of community management's effect on the well-being of retired elderlies. According to the results in Table 5, community management participation has significantly improved the happiness of the retired elderly for both age groups. The probability of participation in community management of the younger group is slightly higher than that of the older group, with average marginal effects of 7.1% and 5.2%, respectively, which are significant at the 5% significant level.

Community management/governance, as a primary form of social participation for retired elderlies, can significantly improve their happiness and well-being. Specifically, retirees, who have community management willingness, propose community suggestions, & whose suggestions were adopted may achieve high-level happiness or well-beings significantly. The positive impact on retirees' satisfaction through community management is higher than the physical and psychological costs they pay for participating in community management. The impact from participation in community management is more significant in the sample with middle-level education and younger retirees than in the other groups.

CONCLUSION AND POLICY IMPLICATION

This paper studies the mechanism and the effect of the influence of social participation on the well-being of the retired elderly. With the application of family microdata and the Probit empirical method, we could examine the effect of different types and levels of social participation on the well-being of the retirees and understand the contractionary between the decline of physical function and the demand of social recognition and value. It provides a new micro basis and innovative ideas for China to formulate an efficient policy to respond aging issues.

Through the empirical test, we find that when the social participation type is community management, the happiness of the retired elderly is significantly improved. However, when the social participation mode is reemployment, there is a significant decrease in the happiness of the elderly. The decrease degree is much larger when reemployment is temporary work without a formal labor contract. For the retired elderly, the positive impact of social identity, social interaction, & personal development brought about by reemployment is lower than the negative effect of the accompanying frustration due to physical overdraft or incompetence. This negative effect is more noticeable for the retirees with high school and lower education level and elderlies retiring over 5 years. But it has no significant negative effect on the happiness of the younger retirees. On the contrary, the positive influence of retired people's social identity and value recognition through community management is higher than the physical and psychological costs of participating in community management. Moreover, further analysis of heterogeneity shows that participation in community management improves the happiness of the retired elderlies more significantly in the sample group with secondary education and the sample of young retired elderlies.

From the perspective of policy implications, exploring the influence of different social participation modes on the happiness of the retired elderlies provides a foundation and policy perspective for China to formulate an effective policy to respond to the aging issues and improve elderlies' quality of aging life. Government should pay substantial attention to the subjective well-being of the elderly and focus on diversifying social participation activities that may meet the needs, hobbies, & capabilities of the elderly. The detailed discussion can be expanded as the following three points.

Promoting elderly participation in society through community management utilizes the strengths of retired individuals, such as their esteemed authority, strong interpersonal affability, & flexible schedules, to aid pertinent institutions in their day-to-day operations. This approach decreases administrative costs, bolsters community security, & enhances communal harmony. Involvement in community management and governance development aligns with the retired elderly's demands of social interaction, identity recognition, value and significance, ultimately leading to a substantial enhancement in their overall well-being and happiness.

Government could expand the avenues of social participations and engagement and diversify the way of community management, such as creating volunteer opportunities within communities for retirees. This may enhance their subjective well-being and happiness by providing ways to recognize their social value and reduce government costs. For instance, establishing community libraries tailored to meet the physical conditions of the elderly could provide them with suitable social work opportunities.

It is imperative to encourage, protect, & provide support for older adults who remain capability and willingness to work. Participating in the labor market after retirement is still one of China's most common and important social participation formats. Our empirical findings indicate that only reemployment without formal labor contracts significantly diminishes the well-being of the elderly. As one of the primary forms of social participation, for the elderlies with high education background and professional skills, engagement in the labor market stands as a pivotal measure to address the challenges posed by an aging society, which should be actively encouraged and supported. Therefore, before promoting elderly employment, it is essential to establish further regulations within the elderly employment market to mitigate the adverse effects of informal reemployment among retired individuals. Meanwhile, in line with our empirical results, retired older adults who have achieved notable success in their professional careers can leverage their work experience and technical knowledge to contribute meaningfully to society through reemployment. Such reemployment opportunities can yield mutual benefits for both society and the elderly and, as such, should be endorsed and promoted.

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ENDNOTE

1. Considering the minimum value is negative, before taking the logarithm, the treatment is set the annual family income plus the minimum value and plus 1.

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