Effects of social activities on labor participation among middle-aged and older adults in China

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Abstract: This paper analyzes the impact of social activities on labor force participation using a Probit model based on data from the China Health and Aging Tracking Survey 2018. The empirical results demonstrate that participation in social activities as well as higher social activeness has a significant negative impact on labor force participation of middle-aged and elderly people.it can be seen that the current social participation in China lacks a form of social participation oriented to labor participation, resulting in the lack of a good development of the middle-aged and elderly labor force or the enhancement of their human capital and that the middle-aged and older adults engage in social activities, even increases the likelihood that they will drop out of the labor market.

1. Introduction

Population aging is a product of economic and social development and is a problem faced by humans worldwide. It refers to increasing the proportion of older people over 65 years old in the total population. China entered an aging society in 1999. The increase in the aging population brings many problems. The number of people of working age is decreasing, leading to a decline in the number of workers. Concurrently, the proportion of middle-aged and older people is increasing. According to the last two population censuses data, from 2010 to 2020, the proportion of China's elderly population aged 60 and above increased by 5.44 percentage points, while the ratio of the working-age population aging 15-59 decreased by 6.79 percentage points from 2010 to 2020[1].The decrease in the working-age population and the increase in the middle-aged and elderly population have led to a gradual decline in China's overall labor force participation rate.

Changes in the quantity, quality, and structure of the population will fundamentally change the pattern of social governance. The characteristics and demands of the elderly should be taken into account to create a social environment suitable for the participation of the elderly, to enhance social participation of the elderly, and to build an all-age friendly society. Participation in community activities is a common form of social engagement, with nearly half of urban seniors playing an important role in community policing, cultural activities and volunteer services [2]. Middle-aged and older adults can be participants or organizers of these activities and in so doing they take up some of the social functions separated from the government in the community. These activities have some advantages, allowing middle-aged and older people to use knowledge and skills that they have, to increase their sense of social values and social communication skills [3], and to avoid the gradual marginalization from society [4]. To enable older people to participate in social development and adapt to social change, China is committed to promoting education for middle-aged and older people. Educational activities such as skills training, primary education, reasonable physical exercise, recreation, and health promotion are aimed at mobilizing middle-aged and older adults to participate in learning and social activities[4].

Although middle-aged and older adults are already involved in volunteerism and community activities to varying degrees, there is still much room for further exploration [1]. It has been suggested that human resources of middle-aged and elderly people should be fully utilized to reduce the retirement burden of individuals, families, and society and to improve the labor shortage to

some extent, but they think current social activity for middle-aged and elderly people only focus on leisure and health and lack job-specific systematic and specific education and training activities, and therefore they cannot reasonably increase the employment and labor participation of middle-aged and elderly people[5]. However, it is also believed that current social participation can bring many benefits to older adults, such as being effective in improving their physical status, as well as facilitating their connection with individuals around them, expanding their social circle, and contributing to their life satisfaction [6]. In short, it can increase human capital and social capital of middle-aged and elderly people. Human and social capital are important factors influencing labor force participation in middle and old age, then, whether these social activities in which middle-aged and older adults participate can reasonably develop the human and social capital of middle-aged and older adults and become a booster to promote the labor participation of middle-aged and older adults is the question that this paper hopes to study.

This paper uses 2018 data from the China Health and Retirement Longitudinal Study to explore the impact of social participation on labor participation of middle-aged and elderly people and to provide a basis for how to promote the effective development of human resources of middle-aged and elderly people, reasonably rediscover the potential of middle-aged and elderly people, and promote their labor participation.

2. Literature References

Understanding the labor force participation of middle-aged and older adults is complex. Previous studies have mainly focused on the impact of human capital (such as health status, education level, and family characteristics) on labor force participation, but less attention has been paid to social participation as an influencing factor. However, current research argues that social activities accumulate human and social capital, while human and social capital are important for individual labor participation. It has been suggested that participation in social activities can affect human capital and social capital in middle-aged and older adults. First, social activity facilitates the formation of human capital in middle and old-age, which include impacts on physical health, cognitive abilities. Most of the current research has shown that social activity significantly improves the health of middle-aged and older adults, They suggested that social interaction can promote the transmission of health information among the elderly and strengthen their health awareness, thus enabling them to acquire healthy living habits, which can affect their physical health level [7], and that opportunities to participate in social activities may slow cognitive decline in middle-aged and older adults [8]. For the social capital, It has been suggested that social activity broadens the social network of middle-aged and elderly people, increases information exchange, and increases social trust of middle-aged and elderly people [9]. The accumulation of human and social capital can support participation in the labor force. The first is that, to some extent, health status represents whether an individual is able to engage in labor force participation, and the better the health status, the higher the labor force participation rate of middle-aged and older adults [10]；Second, the use of accumulated social connections for job searching can lead to jobs that are more in line with an individual's career plan, and also saves search costs and promotes labor force participation [11].

3. Data and Methodology

3.1 Data source

This study uses a nationally representative national sample, using data from the 2018 China Health and Aging Tracking Survey (CHARLS), which includes people aged 45 and older and includes household circumstances, financial assets, community circumstances, and more, in addition to the individual circumstances of the population surveyed.

3.2 Measures

3.2.1 Dependent variable: Labor force participation

The dependent variable is labor force participation. The measure is a binary variable, set to 1 for respondents with annual labor hours, and set to 0 for respondents without annual labor hours.

3.2.2 Main explanatory variable: Social participation

The main explanatory variable is social participation, which is measured in two ways. First, it is measured as a binary variable, equal to 0 if the respondents did not perform any social activities in the past month and equal to 1 if they performed at least one of the following activities in the past month: interacted with friend; played Ma-Jong, chess, cards, or went to community club; provided help to non-resident family members, friends, or neighbors; went to a sport, social, or other kind of club; took part in a community-related organization; did voluntary or charity work; cared for a non-resident sick or disabled adult; attended an educational or training course; invested in stocks; used the Internet.

The final measure is social activeness. It is defined as:

$$C = \sum_{i=1}^{N=11} (A_i \times F_i)$$

where C represents social activeness, A_i represents social activities (referring to above question with 11 social activities), and F_i indicates the frequency of each social activity. The variable A is labeled as a dichotomous variable, while the variable F is derived from the follow-up question: "In the past month, how often did you do the activities you just mentioned? About every day, about every week, or infrequently?". For each activity, F takes the value of 1 if the activity was infrequently performed, 2 if it , was performed weekly, and 3 if it was performed daily [6].

From this we can see that (the presence or absence of) social activity multiplied by the frequency of social interaction actually has only four taking results, namely 0, 1, 2 and 3.The theoretical range of social activity is 0-33 and the actual range based on sample responses is 0-21, with a mean value of 2. So, the activity level greater than 2 is called high activity level set to 1, less than or equal to 2 is called low activity level set to 0.

3.2.3 Control variable

The control variables in this paper include three components: basic individual characteristics, household characteristics, and social security. Individual characteristics include gender, age, education level, health status, etc.; family characteristics include family assets, financial support, care for grandchildren, etc.; and social security includes health insurance, pension insurance, etc.

3.3 Model

Model for the binary measure of labor participation:

The labor participation measures is a binary variable, taking the value of 1 for participation and 0 for non-participation. Therefore, binary Probit regressions can be used to explore the relationship between social activity and labor force participation., the binary logistic regression model can be written as:

$$Pr(labor\ participation = 1) = \phi(\beta_0 + \beta_1 x_1 + \ldots + \beta_n x_n + \varepsilon)$$

3.4 Summary Statistics

As shown in table 1 descriptive statistics, the average age of the sample was 60.8 years; 49% of the sample was male and 51% female. Regarding the labor force participation status of middle-aged and older adults, 66.5% participated in the labor force. Regarding social participation, the social participation rate of middle-aged and older people is 56%, and only 36% of middle-aged and older adults are very active in social activities. The table also shows the specific social participation programs. Among the three categories, the middle-aged and the elderly in the sample are most

involved in leisure activities, accounting for 46%, and helping others and learning activities are very small, accounting for 17% and 15%, respectively.and 44% of the middle-aged and the elderly do not take part in any social activities.

Table 1 Descriptive statistics

Variable	N	Mean	SD
labor participation [dummy]	15729	0.66	0.47
social participation [dummy]	15729	0.36	0.48
social activeness [dummy]	15729	0.56	0.50
gender (male=1, female=0)	15729	0.49	0.50
age	15729	60.89	9.30
marital status (Married=1, divorced, widowed and Never married=0)	15729	0.87	0.33
urban residence (live in city/town=1,other=0	15729	0.21	0.41
middle school (elementary school and below = 1, other=0)	15729	0.62	0.48
high school (middle school = 1 other=0)	15729	0.24	0.43
bachelor's degree and above(high school and secondary school =1, other=0)	15729	0.12	0.32
education 4 (bachelor's degree and above = 1, other=0)	15729	0.02	0.15
communist party (member of the communist party = 1; other= 0)	15729	0.10	0.30
transfer from children	15729	4850.00	11664.28
transfer to children	15729	7942.26	37256.24
grandparenting (with care for grandchildren = 1, without =0)	15729	0.43	0.50
health insurance (very good, good = 1; other=0)	15729	0.24	0.43
depression (have depression=1; other=0)	15729	0.32	0.47
chronic disease (no chronic disease = 1 other = 0)	15729	0.79	0.41
household money assets	15729	43539.35	812993.00
pension (with insurance set to 1, without set to 0)	15729	0.90	0.30
health insurance (with insurance set to 1, without set to 0)	15729	0.97	0.16

4. Empirical Analysis

Probit models are used to estimate the effects of social participation on labor force participation among middle-aged and older adults, where social participation is defined in four ways. Table 2 reports the results of marginal effects. Column (1) shows the effect of social participation on labor participation. Controlling for personal and household characteristics, the effect of social participation on labor participation of middle-aged and older adults is negative and statistically significant at the 1% level. More specifically, middle-aged and older adults who socialize are 2.1% less likely to work compared to those who do not socialize. Column (2) shows the effect of social activeness on labor participation. The regression results show that middle-aged and elderly people with a high level of social activity levels have a lower probability of labor participation by 4.1% at the 1% level of significance. The reason might be, with the increase of offline social activities and the development of online Internet, the popularity of We Chat and other social software has constructed new social relations for the middle-aged and the elderly. One of the essential reasons for some middle-aged and older adults to participate in labor is based on the need for communication to relieve the sense of loneliness in their hearts. Participation in offline social activities (for example, square dance and physical exercise) as well as the use of communication software and the Internet have primarily solved the need for middle-aged and older people's communication, communication, and other spiritual needs, thereby reduced the likelihood of labor force participation by middle-aged and older adults [12]. And also it may be due to the lack of social participation activities for the employment of the middle-aged and elderly in China: education for the elderly and community activities are mainly leisure activities, and curricula and activities are designed to enrich the spiritual life of the middle-aged and elderly, resulting in insufficient vocational skills training, and the middle-aged and elderly are not sufficiently equipped with new technologies and new forms of knowledge, which makes it more likely that they will be excluded from the labor market [13].

Table 2: Probit regression results

	(1) Probit	(2) Probit
social activity	-0.021***	
	(0.007)	
social activeness		-0.041***
		(0.007)
age	-0.016***	-0.017***
	(0.000)	(0.000)
gender	0.155***	0.154***
	(0.007)	(0.007)
marital status	0.059***	0.056***
	(0.010)	(0.010)
middle school	-0.064***	-0.063***
	(0.008)	(0.008)
high school	-0.059***	-0.054***
	(0.011)	(0.011)
bachelor's degree and above	-0.013	-0.005
	(0.023)	(0.022)
urban residence	-0.269***	-0.266***
	(0.007)	(0.007)
health	-0.107***	-0.108***
	(0.008)	(0.008)
depression	0.010	0.009
	(0.007)	(0.007)
chronic disease	-0.042***	-0.042***
	(0.009)	(0.009)
household assets	0.003***	0.004***
	(0.001)	(0.001)
transfer from children	-0.001	-0.001
	(0.001)	(0.001)
transfer to children	0.005***	0.005***
	(0.001)	(0.001)
grandparenting	-0.047***	-0.047***
	(0.007)	(0.007)
health insurance	0.015	0.014
	(0.021)	(0.021)
pension	0.045***	0.045***
	(0.011)	(0.011)
communist party	-0.024**	-0.023**
	(0.011)	(0.011)
N	15729	15729
Pseudo R	0.212	0.213

Standard errors in parentheses * p < 0.1, ** p < 0.05, *** p < 0.01

5. Summary

This paper analyzes the impact of social participation on the labor participation of middle-aged and older adults over 45 years old in China, using data from the 2018 China Health and Aging Tracking Survey (CHARLS). The study concludes. Social activities and social activeness significantly reduced the likelihood of labor participation among middle-aged and older adults. Moreover, in addition to social activity and activeness of China's middle age and elderly population is also influenced by factors such as gender, age, marital status, education level, health status, and economic status.

Synthesizing the findings of this paper and the current situation of social participation of middle-aged and older adults in China, this paper puts forward the following suggestions:

Recommendations for the community and the university for elderly, Urban and rural communities should encourage middle-aged and older persons to continue to play their roles, communities should actively encourage labor participation of middle-aged and older adults. For example, they may explore flexible employment modes suitable for middle-aged and older adults. They may set up an information database on skills of potential workers. They may provide services such as vocational and skills training for adults who are willing to work. Universities for older people should take more employment and participation in the workforce as their starting point in the process of learning or training so that while enriching the spare time of middle-aged and older adults, they can also enable middle-aged and older adults with a desire to find employment to acquire new technologies and skills, and thus acquire the abilities and conditions necessary for participation in the workforce, thus providing more opportunities to promote participation in the workforce by middle-aged and older adults.

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