

Research Hotspots and Prospects for Labor Participation of the Elderly in China—Bibliometric Visualization Analysis Based on CiteSpace

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Abstract: By using CiteSpace software to analyze the database of "Core journals" and "CSSCI Journals" in CNKI, the results show that: the number of published papers shows a fluctuating growth trend; The research focuses on the behavior and decision-making of the elderly labor participation, the influence of the elderly labor participation, and the realization path of the elderly labor participation. Future research focuses on how to develop elderly human resources under the common background of population aging and the implementation of the three-child policy, so as to provide a basis for policy formulation.

1. Introduction

According to the seventh national population census data, the proportion of elderly people aged 65 and above in China's total population in 2021 is approximately 14.20%. According to the aging society standards proposed by the United Nations, China has entered a moderately aging society and is moving towards a deep aging society. Population aging has caused the increase of the size of the elderly population and the decline of the working-age population, which will have a certain impact on the level of labor supply^[1]. The "14th Five-Year Plan" for the Development of the National Cause for Aging and the Elderly Service System pointed out that it is necessary to strengthen employment services for the elderly and encourage professional and technical personnel to reasonably extend their working life.

More and more scholars have paid attention to the significance and importance of research on the elderly's labor participation, but few existing studies have systematically summarized and combed the research literature on the elderly's labor participation in China. In order to make a deeper understanding of the status and hot trends of research on elderly labor participation, this paper makes a systematic analysis of core literature in the field of elderly labor participation with the help of CiteSpace, to discuss research hotspots and development paths in this field, an attempt to provide basis for policy-making and practice of elderly labor participation in our country, and provide reference for subsequent research.

2. Data sources and research methods

2.1 Data sources

The literature data sources of this paper are selected from the "Core Journals" and "CSSCI Journals" databases of CNKI. The literature search was conducted on May 14, 2023, using advanced search with the subject words "labor participation of the elderly" or "labor supply of the elderly" or "re-employment of the elderly". 239 literature records were retrieved, covering the period from 1993 to 2023. After the search was completed, the documents that did not meet the requirements were checked, and 212 valid documents were finally obtained.

2.2 Research method

In order to make a more comprehensive and systematic understanding of the research hotspots and trends in the labor participation of the elderly in our country, this paper makes a visual analysis of the literature on the study of the labor participation of the elderly in our country with the help of the CiteSpace software developed by Professor Chen Chaomei by using the bibliometric method and the scientific knowledge graph analysis method. CiteSpace software can extract and analyze information data such as research authors, research institutions, research topics and keywords to mine the potential knowledge contained in scientific literature, and visually present the structure, rule and distribution of scientific knowledge with the help of visual knowledge graph^[2].

3. Visual analysis of research literature on labor participation of the elderly in China

3.1 Analysis of publication trend of research literature

According to Figure 1, the number of documents is a trend of fluctuating growth. Research on elderly's labor participation has drawn the attention of the academic community and has something to do with the increasing aging of the population in our country. Before 2009, the average number of articles on the elderly's labor participation was two articles per year. At this stage, the total supply and demand of labor force was basically balanced or even oversupply. The topic of the elderly's labor participation did not attract scholars' attention, and the number of papers published in relevant literatures was few. In 2010, China's labor supply and demand pattern has changed, from the basic balance to the shortage of labor supply^[3]. The government attaches great importance to the cause of the elderly. In 2011, *China's "12th Five-Year Plan" for the development of aging undertakings* proposed to "pay attention to the development of human resources for the elderly, and support the elderly to participate in economic development and social welfare activities in an appropriate manner." It can be seen that the changes in labor supply and the introduction of national policies have promoted the academic community's attention to and investment in the study of the elderly's labor participation. The number of published papers has gradually increased since 2010, and the number of published papers has reached a peak of 33 in 2020, and 32 published papers in 2022 are second only to 2020.

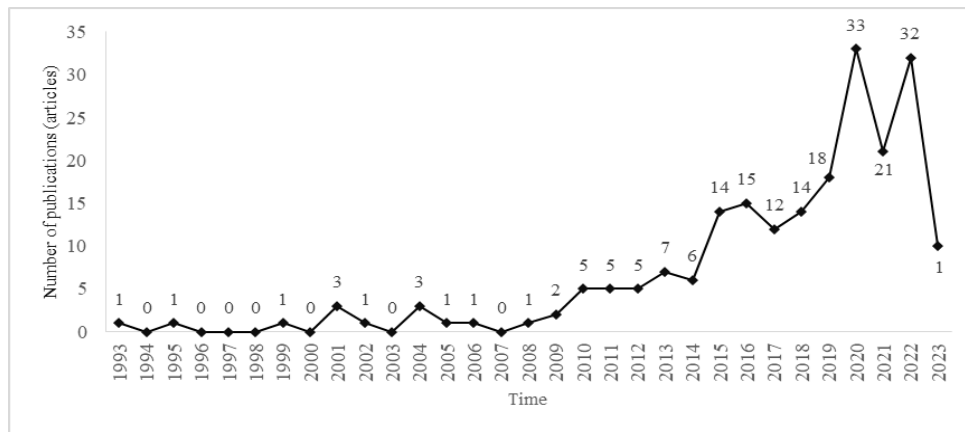


Figure 1: Number of publications on labor participation studies of the elderly in China from 1993 to 2023

3.2 Key words cluster analysis

The LLR algorithm was used to obtain the keyword cluster map on the CNKI platform, with the modularization value $Q = 0.6905$ and the average contour value $S = 0.9063$. (Generally, Q value greater than 0.3 and S value greater than 0.7 indicate that the cluster visualization map is significant and reasonable.) It shows that the clustering map is reasonable and reliable. Nine clusters are formed: # labor participation, # aging, # elderly, # health, # new agricultural insurance, # replacement effect, # re-employment, # delayed retirement, # family pension, # labor insurance and medical care. Sorting out the keywords under the clustering graph, it is found that the research topics of the elderly labor participation in our country can be divided into the following three aspects.

3.2.1 Labor participation behavior and decision-making of the elderly

The research on labor participation behavior and decision-making of the elderly mainly involves the influencing factors. The factors that affect the labor participation behavior of the elderly include gender, age, education, health and family. For example, men have a higher labor force participation rate relative to women; With the increase of individual education level, the probability of labor participation increases significantly^[4]. Health has a significant impact on the labor participation of the retired elderly, and with the decline of health status, the labor participation rate of the retired elderly is significantly reduced^[5]. Intergenerational care significantly reduces the labor supply of middle-aged and elderly people^[6]. The economic support of the children significantly reduces the probability of the rural elderly to engage in their own agricultural production activities, and the economic subsidies of the elderly to the children will promote the probability of the elderly to participate in various production activities^[7]. On the big picture, For example, the "new agricultural insurance" will restrain farmers' willingness to work endlessly, and the old-age insurance for urban enterprise workers will encourage people to reduce the level of labor supply and encourage workers to retire early^[8].

3.2.2 The influence of labor participation of the elderly

The labor participation of the elderly will have an impact on macro decision-making and on themselves. From the perspective of the impact on macro decision-making, the aging of labor force has a restraining effect on the decision of farmland transfer^[9]. The employment of the elderly is complementary rather than competitive, and can increase the number of effective workers in the

labor market^[10]. From its own point of view, labor participation behavior has a positive effect on improving the self-rated health and daily living ability of the retired elderly group and improving the chronic disease situation of the elderly group^[11]. It also had a negative effect on depressive symptoms in the elderly, and the level of depressive symptoms in the elderly engaged in labor participation was lower^[12].

3.2.3 The realization path of labor participation of the elderly

In order to actively cope with the problem of aging and labor shortage, it is the future development trend to redevelop the human resources of the elderly and encourage the re-employment of the elderly. Scholars have put forward a series of proposals to promote labor participation among the elderly. First, we should ensure the health of the elderly and strengthen the health examination and management of the elderly^[13]. The second is to set up vocational training courses for the elderly according to the post requirements of the elderly. The third is to improve the protection policy of the re-employment rights and interests of the elderly, establish a flexible and progressive retirement system, and make institutional provisions to avoid damage to the labor rights and interests of the elderly^[14].

3.3 Research frontier trends change analysis

By running the "keyword emergence" option function of Citespace software, the top 25 emergence words in the research field of elderly labor participation in China from 1993 to 2023 are sorted according to the emergence starting year.

The research on the labor participation of the elderly in China can be roughly divided into two stages. Before 2019, there was high attention to "rural", "elderly", "re-employment", "delayed retirement" and "new agricultural insurance", etc., and there were more discussions on the re-employment of the elderly. The re-employment of the retired people has higher life satisfaction than that of the unemployed, and it also promotes health^[15]. In addition, attention has been paid to the labor supply of the rural elderly, including the excessive labor participation of the rural elderly, and the influence of the new rural insurance on the rural elderly labor participation. The key words of concern after 2019 include "labor participation," "aging," and "intergenerational parenting." Scholars are concerned that the intensification of population aging will increase the social dependency ratio of the labor force, slow down the growth rate of the labor force, and then lead to the reduction of the effective supply of labor force. With the adjustment of the fertility policy, how to coordinate the balance between family and work, child rearing and labor participation of the elderly has become the focus of attention.

4. Conclusion

In this paper, CiteSpace is used to sort out 212 CSSCI and core journal literatures on the research field of Chinese elderly labor participation from 1993 to 2023 collected by CNKI, and summarize the research hotspots and trends in this field. It should be noted that the existing research on the labor participation of the elderly is mainly empirical research, and theoretical analysis is less. In the future, more theoretical system research is needed. The second is to pay attention to the effect of the implementation of the elderly labor participation. At present, most of the problems are raised through empirical research, and future research should focus on the effect of the implementation of the system.

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