

# Visualisation and Analysis of a Study on Community-Based Home Care for the Elderly Living Alone in China

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**Abstract: Objective** To comprehensively and systematically sort out the research status, hotspots and development trends of the research on community-based home care for the elderly living alone in China, with a view to providing reference for the development of research in this field in China. **Methods** Using the three major Chinese databases, China Knowledge (CNKI), Wanfang, and Wipu, as data sources, we retrieved the academic literature in the field of community-based home care for elderly people living alone in China included during the period of 2018-2022, and applied CiteSpace software to draw visual maps and analyse them. **Results** A total of 329 valid documents were included, and the field has shown an overall steady upward trend in the number of publications over the past five years. The hotter keywords in this research area are elderly living alone, social work, social support. **Conclusion** The research in the field of community home care for the elderly living alone in China has been deepening, with social work, empty-nested elderly, spiritual comfort, and urban and rural home care services as the main research directions.

**Keywords:** Older People Living Alone; Community Aged Care; Hot Topics; Development Trends; CiteSpace

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## Introduction

Since China's entry into an aging society in 2000, the population aging process has accelerated. The number of older persons living alone, a vulnerable group that requires special attention, is increasing due to societal development and changes in family structure<sup>[1]</sup>. The seventh national population census data confirms the rising proportion of elderly people living alone in China<sup>[2]</sup>. Community-based home care plays a vital role in China's elderly care system, serving as the primary mode of care in urban and rural areas<sup>[3]</sup>. This study utilized CiteSpace visual analysis software to compile and analyze recent literature on community-based home care for older individuals living alone in China, aiming to provide a reference for future research in the field.

## 1. Research methodology and data sources

### 1.1 Research methodology

CiteSpace software is one of the mainstream international literature visualisation and analysis tools.<sup>[4]</sup> This study introduces CiteSpace software to the literature exported from three Chinese databases, namely, China Knowledge Network (CNKI), Wanfang, and Wipu, and the time span is set as 2018-2022, to draw a knowledge mapping to visually present the hot topics and development trends of research in the field of community-based home care for the elderly living alone in China.

### 1.2 Data sources

The data for this study were obtained from three Chinese databases, namely, China Knowledge Network (CNKI), Wanfang, and Wipu, and the search terms were set to "theme=living alone elderly" AND "theme=community home care", and

the search time range was set to be 1 January 2018-31 December 2022, and in order to ensure the scientificity and validity of the sample documents, the documents were de-emphasised and screened one by one to determine the effective documents to be 329, which constituted the samples for this study.

## **2. Results**

### **2.1 Distribution of annual publications in the literature**

In the past five years, 329 articles on community-based home care for the elderly living alone were published in China, showing a consistent upward trend. On average, approximately 65 articles were published annually, indicating a strong academic focus on this issue.

### **2.2 Distribution of research organisations**

The study's institutional cooperation network mapping reveals a relatively dispersed distribution of institutions in this research area, with limited inter-institutional collaboration and low concentration. China Pacific Life Insurance Company Limited represents the largest institutional cooperation sub-network, while colleges and universities form the majority of issuing institutions.

#### **2.3.1 High-frequency keyword co-occurrence analysis.**

Keywords are a high degree of condensation of the subject of the article, and also reflect the research focus of scholars, so the statistics and analysis of high-frequency keywords can help to scientifically grasp the research preferences and priorities in the research field<sup>[5]</sup>. The keyword co-occurrence mapping obtained in this study showed high frequency of keywords such as elderly living alone, social work, social support, ageing in place, and spiritual comfort. Secondly, CiteSpace uses centrality to measure the importance of keywords in the whole network, the higher the centrality, the higher the influence<sup>[6]</sup>. The centrality of keywords such as elderly living alone, elderly people, home care, social work, and urban elderly living alone are 0.54, 0.36, 0.31, 0.26, and 0.14. To a certain extent, these keywords reflect the hot issues in society and the focus of scholars' attention.

#### **2.3.2 Cluster analysis of high frequency keywords.**

To show the connection between high-frequency words more intuitively, keyword clustering plots were drawn in this study. The Q-value of the mapping in this study is 0.6179 and the S-value is 0.8534, the mapping is valid, and the keyword clustering shows the presence of mapping superimposition, which indicates a strong connection between each other. A total of eight clusters were obtained in this study, which are #0 Older people living alone, #1 Older people, #2 Older people living at home, #3 Older people living alone in urban areas, #4 Social work, #5 Elderly services, #6 Empty nesters, #7 Group work. There is also a high degree of overlap between #2 Ageing in Place, #3 Older People Living Alone in Cities and #4 Social Work, and between #5 Older People's Services and #7 Group Work, which implies that there is a strong link between the clusters and a close relationship between the research components.

## **3. Discussion**

### **3.1 In-depth analysis of research power**

With the aging issue becoming more severe, there has been increasing attention on community home care for the elderly living alone from scholars and society. Policy guidance has also contributed to a booming research output in this area. However, the majority of research is conducted by major universities, with limited involvement from medical and elderly service organizations and government agencies. To promote multidisciplinary collaboration and resource sharing, efforts should be made to expand the cooperation network and establish platforms for collaboration between universities, government departments, and relevant institutions. This will facilitate the development of government policies and improve the overall capacity and quality of elderly care services in society.

### **3.2 In-depth analysis of research status and trends**

In the past five years, China's research on community-based home care for the elderly living alone has focused on four

aspects: urban and rural community-based home care services, empty-nested elderly care, mental health and spiritual support, and social work interventions. However, there is a significant disparity in the development of community-based care between urban and rural areas, reflecting an unbalanced investment and development between regions<sup>[6]</sup>. To reduce the gap in quality of life for the elderly living alone, future efforts should prioritize the development of policies and documents tailored to local needs. Additionally, there is a pressing need for home care services specifically targeting empty nesters. Statistics indicate a significant increase in the number of empty nesters in China, who are more prone to discomfort, pain, and negative emotions like depression compared to non-empty nesters<sup>[7]</sup>, and, secondly, empty nesters have a more urgent need for elderly care services in terms of life care, medical care, and spiritual solace<sup>[8]</sup>. To improve the standard of community-based elderly care, it is necessary to establish a proactive response mechanism for precise services, focusing on the needs of special groups such as empty nesters and singletons. ③There is a strong demand for mental health and spiritual comfort services for the elderly living alone. Elderly people living alone have lower physical health, mental health and social functioning than those living normally<sup>[9]</sup>. The good or bad spiritual and psychological support for the elderly living alone has a great impact on their real life in old age. In the future, special activities such as psychological care for the elderly should be carried out, and exemplary mass cultural activities for the elderly should be sustained, so as to continuously enrich the spiritual and cultural life of the elderly. ④The participation of social work in community-based home care services has significantly improved the quality of life of older persons living alone. In recent years, under the guidance of relevant policies, the intervention of social forces in China has made great progress in helping to meet the needs of the elderly living alone in the community to age in place and in providing them with more possibilities to enrich their life in old age<sup>[10]</sup>. Social work makes full use of social resources to meet the material and spiritual needs of older persons living alone. It is hoped that the influence of social work in the field of community-based home care for older persons living alone will continue to expand in the future.

## References

- [1] Chen S, Liang CY. Analysis of research progress in the field of domestic healthcare integration based on CNKI[J]. *Medicine and Society*, 2020, 33(9): 106-110.
  - [2] Office of the Leading Group of the Seventh National Population Census of the State Council. China population census yearbook-2020 [M]. Beijing: China Statistics Press, 2022.
  - [3] Outline of the Fourteenth Five-Year Plan for the National Economic and Social Development of the People's Republic of China and the Visionary Goals for 2035 [EB/OL]. (2021-03-13) [2023-05-27]. <http://www.npc.gov.cn/npc/kgfb/202103/bf13037b5d2d4a398652ed253cea8eb1.shtml>.
  - [4] Xu Y, Li S, Jiang X. et al. Analysis of the research process, hotspots and trends of traditional Chinese medicine from 2010 to 2019 based on articles in *Journal of Traditional Chinese Medicine*[J]. *Medicine and Society*, 2021, 34(10): 32-38.
  - [5] Wang XX, Guo Q. Analysis of research hotspots and development trend of healthcare integration in China in the past ten years based on CiteSpace[J]. *Chinese Family Medicine*, 2021, 24(01): 92-97.
  - [6] Li Y, Meng XM, Li SY, et al. Analysis of the current status of domestic research on falls in the elderly based on CiteSpace[J]. *Modern Preventive Medicine*, 2019, 46(5): 860-864.
  - [7] Wu YS, Dang JW. *Blue Book on Aging--Report on the Development of China's Aging Industry(2014)*[M]. Beijing: Social Science Literature Press, 2014.
  - [8] Luo W, Cheng P. Impact of social participation status of empty-nested elderly on their health status[J]. *Medicine and Society*, 2023, 36(4): 37-42.
  - [9] Wang MX, Wang K, Zhang XP. Exploring the problem of old-age protection for rural empty nesters--Taking Jiaozhou City, Qingdao as an example[J]. *Journal of Qingdao University (Natural Science Edition)*, 2019, 32(3): 85-91.
  - [10] Golden Love. *Mental Health Intervention Research on Urban Elderly People Living Alone in Difficulties--A Case Study of "Firm Friendship, Hand in Hand" Group*[D]. Guangdong: Guangzhou University, 2022.
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