

Comparative analysis of long-term care quality for older adults in China and Western countries

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Abstract

Objective: Based on theoretical and methodological research and the results of a literature review, we evaluated and comparatively analyzed the quality of long-term care for older populations in China and in Western countries.

Methods: We performed a literature review, using the search terms long-term care and care services for older adults, in the databases ProQuest, CNKI, and Wanfang Data.

Results: Our comparative analysis demonstrated that the overall quantity of articles related to long-term care for older populations was relatively large. The literature comprises advanced accumulated experiences in terms of theoretical and methodological perspectives in developed countries. The field of long-term care is relatively young in China and we could retrieve only a few related studies.

Conclusions: The system of long-term care for older populations in China has much room for improvement. In addition, the evaluation criteria for long-term care quality remain controversial. Relevant research focusing on the quality of long-term care services in the country lacks comprehensive, systematic, and scientific validation, comparison, and evaluation. This topic warrants further evidence-based investigation in China.

Keywords

Long-term care, care services, older adults, health care quality, China, Western countries, review

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Introduction

The concept of long-term care was first proposed in 1963. Long-term care is a type of medical care provided over a long period that includes nursing care and supportive health care services for patients.¹ At present, long-term care is generally recognized as an intermediate care service between care for older adults and medical services. Long-term care specifically refers to the provision of comprehensive and professional services, such as long-term life care, rehabilitation care, and spiritual comfort for older people with physical and mental dysfunction who cannot care for themselves independently. Long-term care is generally provided for more than 6 months and includes professional as well as family- or community-based non-professional care services.²

The quality of care services for older adults has long been a challenging issue facing medical policy makers around the world. The quality of long-term care is strongly related to the quality of life older people who receive these types of service. In China, it is a traditional concept that children are responsible for taking care of their older patients. With overall development and advancement of society and the improvement of economic and social policies, medical care, and pension policies, the Chinese government and society have gradually become the suppliers of care services for older populations. Social care services for older people depend on economic resources, and these services for older people are mainly provided by the government and other societal resources. Specifically, pensions, medical expenses, welfare funds, assistance funds, and life care are provided by social security agencies, governments at all levels, private enterprises, institutions, and social organizations, among others.^{3,4} Owing to the widespread attention given by governments at all levels to this issue, a diverse pattern of social support for older

adults has begun to take shape in China, highlighting the concept of family care support for older people at the center, supplemented by community- and society-based care services.⁵ Although increasingly more older people have begun to choose home-, community-, or socially based care services, those who receive home-based care report the highest degree of satisfaction.⁶ Multiple issues and limitations, such as unsound management and security systems, a lack of funds, unreasonable structure of service providers for older people, low quality and level of care, and poor and outdated facilities and equipment, have emerged in the field of social care for older populations.⁷⁻⁹ The best manner in which to evaluate the quality of long-term care services for older people has become a focus of research in recent years. In the present investigation, we evaluated and comparatively analyzed the quality of long-term care for older people in China and in Western countries, according to theoretical and methodological research and the results of a literature review.

Long-term care profiles outside of China

Theoretical research

Structure–process–outcome (SPO) pattern. In the 1960s, Donabedian et al.¹⁰ put forward the theoretical pattern of structure–process–outcome (SPO), to evaluate care service quality from the three dimensions of structure, process, and outcome. Structure is a service environment attribute and includes the organizational structure, material resources, and human resources required for a service project. Process describes how to apply structural attributes to practice, including direct or indirect services and other supplementary activities received by the service receivers. Outcome is defined as the results of the entire process, and can be used to evaluate the success of

the project. Through monitoring the structure, process, and outcome of nursing care services, the quality of care services can be continuously improved.¹¹⁻¹³ In 1998, the American Nurses Association proposed a novel concept of sensitive nursing quality indicators, based on the SPO model combined with clinical nursing experience.¹⁴ Japan, the United Kingdom, Australia, Iran, and other countries subsequently applied the SPO model to evaluate and discuss the quality of nursing care services in national investigations.^{15,16} This theory can be used to comprehensively assess care service quality using multidimensional factors, to help guide clinical practice. However, the weight of each layer of indicators in the evaluation criteria has been debated. No consensus has been reached regarding the weighted indicators; this remains to be elucidated in future studies.

World Health Organization healthy aging theory.

At the World Health Assembly in 1987, the concept of “healthy aging” was proposed for the first time and was included in the Global Guidelines for Geriatric Health Care by the World Health Organization (WHO). Physical, social, psychological, economic, and intellectual health are regarded as the five assessment criteria of “healthy” within the concept of healthy aging. It is recommended that older people maintain normal functioning in these five dimensions.¹⁷ The healthy aging concept broadly includes the health of older individuals, the health of the older population as a whole, and the health of the human environment.¹⁸ The theory of healthy aging can be set a central goal for those care services provided to older adults worldwide. States of the population, economy, politics, and other influencing factors are diverse and complex across countries and geographical regions, which makes it difficult to globally apply this concept to

accurately measuring the quality of care services in different parts of the world.

Methodological research

Assessing care of vulnerable elders (ACOVE).

In 1998, researchers from the RAND Corporation and the University of California, Los Angeles collectively conducted a community-based study to systematically evaluate the quality of geriatric care for vulnerable older people based on evidence-based medicine, using widely-recognized guidelines and expert opinions. The study covers four aspects of medical services: screening and prevention, diagnosis, treatment, and follow-up.¹⁹⁻²¹ ACOVE-1 was officially applied in 2000, and the latest version, ACOVE-3, was released in 2007, in which the number of medical conditions addressed rose from 22 to 26 and secondary indicators were expanded from 236 to 392. ACOVE is mainly focused on assessing the nursing service process rather than the results of nursing care, which is conducive to continuously improving the quality of nursing care services for older populations.²²

Resident Assessment Instrument Minimum Data Set (RAI-MDS).

Since 1991, the RAI-MDS has been used as a standardized tool routinely used to evaluate the service quality of nursing institutions across the United States. RAI-MDS can be applied for quality assurance and process evaluation. Several variables are collected from older individuals living in nursing care institutions, comprising 230 items. The RAI-MDS is mainly used to evaluate the cognitive ability, functional level, risk of depression, disease status, and rehabilitation treatment of residents. The latest version has been released, the RAI-MDS 3.0, in which 20 additional items were integrated for the evaluation of care service quality.²³⁻²⁵

Comprehensive assessment by government-accredited third-party organizations. In the United States, the Joint Commission was established in 1951 to assess and supervise medical care quality. The Joint Commission subsequently expanded from medical service quality assessment to the field of older adult care services, including evaluation of the advantages and disadvantages of long-term care for older populations.²⁶ As early as 1997, the United States government began to establish admission criteria and a standardized reporting system for institutions providing all care services for older adults; these are used to assess patient satisfaction and to evaluate the quality of care provided. Currently, 11 commonly used assessment tools (30 scales in total) have been developed for use in older populations in the United States; these tools address items including caregivers, dementia and delirium, depression, functional assessment, gait/fall risk, oral hygiene, pain, pressure sores, perception, and urinary incontinence. These items can be used to conduct a comprehensive scientific assessment of older populations and determine the required level of care according to the results of scale assessment.²⁷ In 1988, Accreditation Canada was launched to assess and supervise long-term care service institutions and to conduct comprehensive evaluation of long-term care services under different pension patterns.²⁸ The National Standard of Excellence using Qmentum (Canada) and Qmentum International (international) were subsequently developed as evaluation tools. In 1998, the International Society for Quality in Health Care accreditation agencies and standards were established and developed; the latest version was updated in 2014.²⁹ In Australia, the Aged Care Standards and Accreditation Agency was legislated and officially launched in 1997 to deliver assessment of care services for older Australians; currently, the assessment instrument consists of 44 indicators.³⁰

These findings reveal that most governments in developed countries have established specific agencies and comprehensive assessment criteria for long-term care services provided to older adults, from a management perspective.

Literature review and analysis

Literature review. We retrieved a total of 1,318,752 articles from the ProQuest database using the search term long-term care. The categories of retrieved articles are illustrated in Table 1. Statistics of the relevant literature from 1850 to 2019 are shown in Figure 1, according to an interval of 10 years. We ranked the literature according to the number of publications from different sources (Table 2). In total, 48,616 results were retrieved from the ProQuest database using the search term quality of long-term care for older adults; among these, 36,120 articles were published in academic journals. Statistics of the relevant literature between 1960 and 2019 are illustrated in Figure 2, in 10-year intervals. The top 20 ranked results according to quantity are listed in Table 3.

Table 1. Categories of retrieved documents.

Rank	Category	Total number
1	Academic journal	599,712
2	Magazine	232,591
3	Industry magazine	190,561
4	Newspaper	171,982
5	Report	68,025
6	Blog and website	13,473
7	Company news	10,344
8	Conference papers and documents	422
9	Audio and video materials	132
10	Books	121
11	Research	47
12	Other	31,342
Total		1,318,752

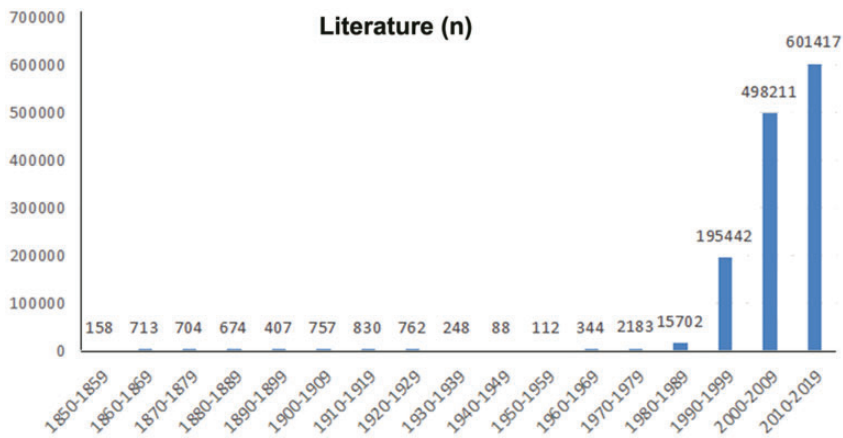


Figure 1. Documents from 1850 to 2019, according to 10-year intervals.

Table 2. Ranking of sources according to the quantity of documents.

Rank	Name of source	Total number
1	Targeted News Service	69,803
2	US Federal News Service, Including US State News	65,436
3	Congressional documents and publications	27,952
4	The New England Journal of Medicine	12,490
5	The Lancet	10,813
6	FT.com	10,440
7	Incidence and Prevalence Data	9,242
8	The Federal Register / FIND	8,298
9	All Things Considered	8,060
10	Morning Edition	7,570
11	BMJ: British Medical Journal (online)	7,297
12	BMJ: British Medical Journal	7,114
13	Phil's Stock World (blog)	6,635
14	Medical Post	6,548
15	Modern Healthcare	5,764
16	Diabetes Care	5,643
17	The Economist	5,571
18	U.S. Department of Defense Information / FIND	5,300
19	The Daily Beast	5,249
20	The Atlantic Monthly	5,234

Literature analysis. According to the literature results, long-term care has gained widespread attention worldwide, especially in academic journals. Based upon the number of results, the amount of literature on long-term care has substantially

increased over the past three decades. The number of publications related to quality of long-term care for older populations reached 48,616, indicating that this field has received considerable attention. The growth in the number of articles

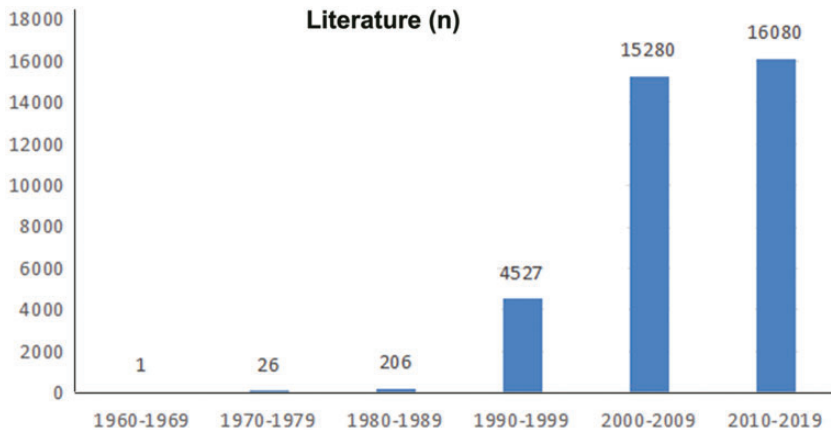


Figure 2. Literature in academic journals from 1960 to 2019, according to 10-year intervals.

Table 3. Ranking according to the quantity of related literature in academic journals.

Rank	Name of academic journals	Total number
1	The Lancet	956
2	The New England Journal of Medicine	860
3	Health Affairs	759
4	The Gerontologist	708
5	International Psychogeriatrics	693
6	The Journals of Gerontology	652
7	The American Heart Journal	538
8	BMJ: British Medical Journal (online)	537
9	BMJ: British Medical Journal	500
10	Journal of General Internal Medicine	496
11	Ageing and Society	441
12	Behavioral and Brain Sciences	431
13	Diabetes Care	398
14	Age and Ageing	385
15	Canadian Medical Association Journal	339
16	Archives of Internal Medicine	338
17	Generations	316
18	Vaccine	307
19	American Journal of Public Health	295
20	The British Journal of Nutrition	259

was fastest between 2000 and 2009, with the largest number of documents (16,080) published in the previous 10 years. According to quantitative analysis of the literature regarding quality of long-term care in international academic journals,

The Lancet was ranked first with 956 articles in total, suggesting that this research topic is currently of great interest and researchers from various countries are actively participating in investigations in this field.

Long-term care profile in China

Theoretical research

In 2004, a relatively systematic theoretical system was first proposed in China, based on the SPO pattern.³¹ The theoretical application of the SPO pattern has been primarily applied in the assessment of nursing care quality in the country. Cui et al.¹⁶ attempted to apply the SPO pattern in evaluating the quality of pension services; however, the SPO pattern has not been used to assess the quality of long-term care for older populations in China. In recent years, extensive efforts have been made to guide long-term care for older adults according to “healthy aging” concept proposed by the WHO. Nevertheless, theoretical research on the quality of long-term care services for older people in China is still in its early stages.

Methodological research

In recent years, the central and local governments have set health care services for the older population in China as a top priority. The quantity of research literature related to aging care services has been substantially enhanced. Huang and colleagues established an indicator system to evaluate the quality of community-based long-term care services for older adults, mainly using the Delphi method, which includes 7 first-level, 27 second-level, and 16 third-level indicators.³² In 2017, Xia et al.³³ established an indicator system to screen and evaluate the daily living capacities of older adults. In addition, those authors further simplified the “Ability Assessment for Older Adults” proposed by the Ministry of Civil Affairs in August 2013, providing a feasible evaluation tool for assessing the status of older individuals. Wang et al. applied an analytic hierarchy process to determine weights of an evaluation index

for the quality of community-based long-term care services for older populations. Those authors stated that during the process of constructing a nationwide community-based long-term care service system for older people, extensive effort should be made toward improving the contents of long-term care services for this population and lowering the related costs, which is a bottleneck that affects the development of long-term care.³⁴ The Residential Care Accreditation Scheme, which consists of 40 items, is currently implemented (RACAS 40: 2014) in Hong Kong.³⁵ However, the industry and management mechanisms of health care for older people require improvement, yet relevant research on the evaluation of long-term care service quality is rarely carried out.

Assurance system for long-term care quality

At present, quality assurance of health care services for older individuals relies mainly on supervision and implementation by governmental institutions at all levels to provide financial support. In relatively developed regions of China, long-term care insurance and bedside accidental insurance have been implemented to improve the quality of long-term care services for the older populations in those parts of the country. On 22 March 2017, the Ministry of Civil Affairs released the “Guidelines for Quality Inspection of Nursing Homes”, which consists of a total 115 eligible assessment indicators.

Literature review and analysis

A total of 792 documents were retrieved from the CNKI database, and 1902 were obtained from Wanfang Data using the keyword long-term care; the categories of documents retrieved from the latter

database are listed in Table 4. The most numerous publications were journal articles, which is consistent with publications in English. In China, the first report was published in 1994; statistics of the literature published from 2008 to 2018 are depicted in Figure 3. The number of relevant publications has gradually increased in recent years, with the most published in 2017 and 2018 (473 and 191, respectively). There were fewer relevant publications in 2018 compared with the previous year, which is likely because accepted articles had not yet been published at the time of our search. Using the keyword quality of long-term care services for older

populations, we retrieved no relevant literature from the CNKI database and obtained a mere 30 results using Wanfang Data, including 20 journal articles, 7 dissertations, and 3 conference papers. The earliest document was published in 2010, and the most articles (8) were published in 2017.

Challenges and prospects of long-term care quality in China

In developed countries, long-term care and quality of long-term care services for older people are topics that have been widely and extensively studied, yielding abundant accumulated theoretical and methodological experiences that can be used a reference for Chinese practitioners. Moreover, a relatively mature system has been established in Western countries for the assessment of care service quality, which comprises social security systems and construction of management standards for pension institutions to ensure the quality of long-term care services in older populations. Nevertheless, few such studies have been carried out in China, suggesting that the quality of long-term care for older people in China is poorly developed. There is a large and rapidly aging population of adults in China, yet

Table 4. Categories of documents retrieved from Wanfang Data.

Rank	Category	Total number
1	Academic journal article	1537
2	Dissertation paper	227
3	Conference paper	117
4	Patent	10
5	Scientific and technological results	9
6	Regulations and laws	2
Total		1902

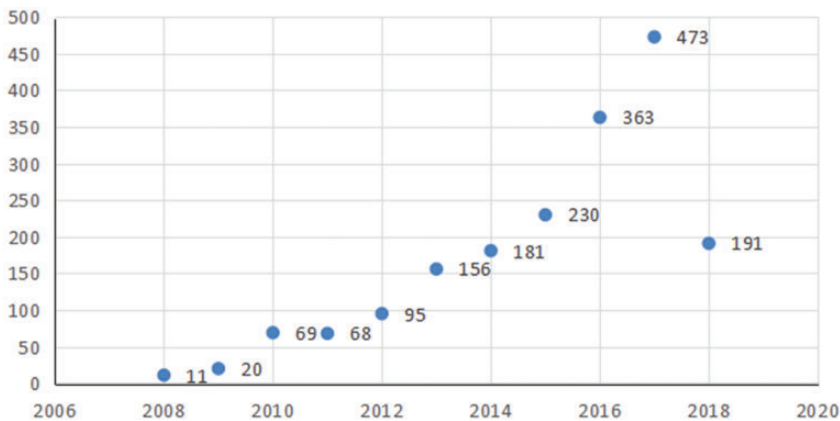


Figure 3. Literature published from 2008 to 2018.

older individuals often cannot receive needed long-term care services. In addition, the establishment and management of long-term care services for older adults are not standardized. No consensus has been reached on the evaluation criteria for long-term care service quality. An overall, systematic, scientific, comparative evaluation system of the quality of long-term care services is still lacking. Consequently, it is of great importance to explore comprehensive evaluation indicators based on the current status of long-term care for the population of older people in China, to promote standardized management and improve care service quality for this population.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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