



Path Analysis of Chinese Medical Journals Entering International Core Databases - Taking 9 Medical Journals Included in the Scopus Database in 2023 as an Example

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Abstract. In recent years, Chinese medical journals have been actively exploring the path to internationalization. Being included in well-known domestic and foreign databases is a major dimension of the journal's internationalization practice. Being included in more well-known domestic and foreign databases is of great significance for expanding the journal's audience group and extending the influence of the publication. Based on a basic review of the inclusion criteria and influence measurement indicators of the Scopus database, this article takes 9 medical journals included in it as the investigation objects. It analyzes the success factors for being included in Scopus from the dimensions of basic situation, influence situation, content characteristics, multimedia dissemination, and integration with internationalization. Then it provides enlightenment for medical journals to attach importance to relevant norms, ensure content quality, explore development characteristics, promote website construction, explore multimedia development, and pay attention to frontier and development trend information.

Keywords: Scopus, inclusion in retrieval systems, medical journals, internationalization.

1 Introduction

In recent years, China's academic output has been in a process of accelerated development. The amount of academic output is on a par with that of Europe and America. Authors with high influence have accounted for 15% of the world's total. However, the number of scientific and technological journals registered in China only accounts for about 4% of the total number of journals included in the Scopus database (the world's largest abstract and citation database). Only about 5% of the SCI papers published by Chinese authors are submitted to journals in Mainland China, which is far lower than the growth rate of the number of China's SCI papers^[1]. The report at the 19th National Congress of the Communist Party of China proposed to promote the construction of international communication capacity, tell Chinese stories well, and enhance national cultural soft power^[2]. This requires us to greatly enhance the international influence and communication power of Chinese academic journals.

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Enabling more Chinese scientific and technological journals to be included in major international databases is the direction of efforts for most scientific and technological journals at present and in the future. Previously, some scholars have studied the situation of Chinese scientific and technological journals included in DOAJ and investigated the subject areas, types of license agreements, quality control and charging policies of 68 Chinese open access journals included in DOAJ, providing some valuable reference suggestions for academic journals to achieve internationalized and standardized open access publishing^[3]. As early as 2014, some scholars studied the situation of China's medical journals included in DOAJ and pointed out the problems and the direction of efforts^[4]. There are also scholars who have studied the situation of China's medical journals being included in 28 international important databases in countries such as the United States, the United Kingdom, Germany, Russia, Japan, the Netherlands, Poland, and the Philippines, and have introduced in detail the situation of Chinese medical journals being included in 18 international important databases such as SCI, MEDLINE, CA, BA, and INSPEC, and briefly introduced the requirements of international databases for selecting journals^[5]. However, with the advent of the era of Internet multimedia artificial intelligence, the way of disseminating scientific and technological information has undergone tremendous changes. The international dissemination of Chinese scientific and technological journals in China has entered a new era.

The Scopus database is a scientific research retrieval analysis and discipline planning management database launched by Elsevier Press. It is a peer-reviewed journal abstract and citation database. It has included more than 26,000 journals from more than 7,000 publishers since 1788, covering the world's most extensive scientific and technological and medical abstracts and other contents^[6]. With the improvement of the operation level of Chinese journals, the level of journals included in Scopus is also improving year by year. Among the 44 Chinese journals that entered the Scopus database for the first time in 2023, there are 9 medical journals, which fully shows that Chinese medical journals in Chinese are accelerating their entry into the internationalization process. However, compared with more Chinese medical journals that have not yet entered well-known international retrieval databases, there are still many aspects that need to be improved in order to achieve international dissemination.

Therefore, this article uses the case study method, taking 9 medical journals that newly entered the Scopus database in 2023 as the research objects, and analyzes the characteristics of these publications from several aspects such as content quality, editorial norms, dissemination strategies, and internationalization standards, so as to provide references for other Chinese medical journals.

2 Selection Criteria of the Scopus Database

According to the information disclosed on the official website of the Scopus database, the journals included in the database are those that are independently applied for by the journals. They provide structured information such as the journal's goals, publisher, editors and editorial system, publication history, and publication ethics. Based on

meeting the minimum standards in dimensions such as peer review, ISSN registration, English abstracts and titles, and publication ethics, they are selected by the Scopus Content Selection and Advisory Board (CSAB) through continuous and regular reviews with multiple quantitative and qualitative indicators. The specific criteria of the indicators are mainly divided into five categories: journal policy, content, journal reputation, regularity, and online accessibility, with a series of detailed rules. It is also pointed out in the document that the extensiveness and internationalization of the journal's readership is a major dimension for consideration. In addition, the database implements a dynamic evaluation mechanism for journals. If a journal performs poorly, the latest content of the journal will stop being included. There are also four local committees in Thailand, South Korea, Russia, and China that provide pre-review and expert opinion services for the journals reported locally. The establishment of local institutions not only promotes the inclusion of journals in the database but also promotes the advancement of quality standards based on the local situation.

3 CiteScore Calculation Method

CiteScore, also known as citation score, helps users understand and evaluate the influence of journals. CiteScore calculates the average number of citations for each journal based on a four-year interval and provides relevant information on journal field rankings and journal partitions, enabling users to clearly see the importance and trend analysis of the journal in its field at a glance. It is used as a reference for the influence of the submitted journal and is calculated once a year^[7]. Taking 2022 as an example, CiteScore 2022 calculates the number of citations made in 2019 - 2022 to articles, reviews, conference papers, book chapters and data papers published in 2019 - 2022, and then divides this number by the total number of publications published in 2019 - 2022.

4 Two Stages of Scopus Journal Selection

Scopus is the currently largest abstract and citation database in the world launched by the Elsevier Publishing Group, integrating disciplines such as natural sciences, life sciences, medicine, and social sciences with an extremely wide range. As we all know, the inclusion standards of the Scopus database are relatively strict. The selection criteria of Scopus for journals mainly include two stages: pre-submission and self-evaluation; Scopus journal evaluation. The minimum selection criteria must be met to enter the review process. In addition, generally, it is also required that the journal has at least two years of publication history to enter the second stage of the Scopus review process. Common reasons for domestic journals being rejected when applying for inclusion include: lack or incompleteness of statements on publication ethics, insufficient specification of publication ethics regulations, such as failure to clearly state measures for preventing academic misconduct; insufficient domestic and international citations; overly regionalized publication directions; and non-standard website functions.

As the main body for publishing achievements, the publishing process of scientific and technological journals is not only the place where academic misconduct most frequently occurs, but should also be an important link in detecting and controlling academic misconduct^[8]. For an academic journal with a high level of internationalization, its overall scope and concept must also reflect the level and quality of internationalization, rather than just having one or two editorial board members or consultants from other countries. Journal publishing tends to digital transformation, and the construction of scientific and technological journal websites is an important part of its digital publishing. Foreign journal website content push services are more popular, more interactive, and pay more attention to the development of characteristic services^[8].

5 Nine Medical Journals Included in the Scopus Database in 2023

5.1 Basic Information of 9 Medical Journals

The basic information of the 9 medical journals is shown in Table 1. The survey content mainly includes the journal's CiteScore, sponsoring organizations, sponsoring locations, chief editors, ISSN numbers, etc. The sponsoring organizations are mainly universities, various scientific research institutes and academic societies. The sponsoring locations are distributed in various regions such as East China, South China, North China and West China. The chief editors or editors-in-chief are all expert scholars with rich experience and influence in relevant fields.

Table 1. Basic information of the 9 investigated medical journals

Journal name	Cite Score	Sponsor	Sponsor location	Editor-in-Chief/Chief Editor	ISSN number
Chinese Journal of General Surgery	1.0	Central South University	Xiangya Hospital of Central South University Changsha City, Hunan Province	Wang Zhiming	1005 - 6947
Organ Transplantation	0.7	Sun Yat-sen University	Guangzhou City, Guangdong Province	Chen Guihua	1674 - 7445
Chinese Journal of School Health	0.6	Chinese Preventive Medicine Association	Bengbu City, Anhui Province	Tao Fangbiao	1000 - 9817
Chinese Journal of Nursing Education	0.4	Chinese Nursing Association	Beijing City	Li Zheng	1672 - 9234
Drug Evaluation Research	0.3	Chinese Pharmaceutical Association, Tianjin Institute of Pharmaceutical Re-	Tianjin City	Wang Guangji	1674 - 6376

		search			
Chinese Journal of Experimental Traditional Medical Formulae	0.2	Institute of Chinese Materia Medica of Chinese Academy of Traditional Chinese Medicine, Chinese Association of Traditional Chinese Medicine	Beijing City	Wu Yiling	1005 - 9903
Journal of Army Medical University	0.1	Teaching and Research Support Center of Army Medical University	Chongqing City	Bian Xiuwu	2097 - 0927
Chinese Medical Ethics	0.0	Xi'an Jiaotong University	Xi'an City, Shaanxi Province	Wang Mingxu	1001 - 8565
Journal of Medical Pest Control	0.0	Hebei Committee of China Association for Promoting Democracy	Shijiazhuang City, Hebei Province	Duan Ligu	1003 - 6245
Average CiteScore	0.75				

Data source: Scopus, July 10th, 2023

5.2 Nine Medical Journals' Domestic and International Academic Influence

Impact Factor. According to data from China National Knowledge Infrastructure (CNKI) and citation databases, etc., the impact factors of each journal and the citation frequency data of the papers published within 2019 - 2022 are shown in Table 2. Overall, the influence is performing well.

Table 2. Influence and citation situation of the 9 investigated journals

Journal name	Compound impact factor (2022 edition)	Comprehensive impact factor (2022 edition)	Citation frequency (2019 - 2022)
Chinese Journal of General Surgery	1.832	1.618	4757
Organ Transplantation	1.265	1.077	2302
Chinese Journal of School Health	2.125	1.485	13261
Chinese Journal of Nursing Education	1.365	1.119	5556
Drug Evaluation Research	1.408	1.073	8720
Chinese Journal of Experimental Traditional Medical Formulae	4.023	2.831	37971
Journal of Army Medical University	1.266	1.026	238

Chinese Medical Ethics	1.470	1.139	6067
Journal of Medical Pest Control	0.801	0.705	3179

Data source: China National Knowledge Infrastructure Citation Database, as of July 15, 2023

The Situation of Being Included in Domestic and Foreign Databases. The 9 journals investigated in this survey have performed quite well in terms of being included in domestic and foreign databases. The specific situation is shown in Table 3. As for domestic databases, most of the journals are included in important domestic databases such as the Chinese Core Journals of Science and Technology, the Core Journals of Peking University, and CSCD. At the same time, the situation of being included in foreign databases is also remarkable. Chinese scientific and technological journals entering international retrieval systems can not only promote scientific and technological development and international academic exchanges, but also reflect China's scientific and technological competitiveness from the side^[9].

Table 3. The situation of the 9 investigated journals being included in domestic and foreign databases

Journal name	The situation of being included in domestic and foreign databases
Chinese Journal of General Surgery	Chinese core journal of science and technology, core version of CSCD, core journal of Peking University, WJCI, CA, AJ, Scopus, JST, CMCC, etc.
Organ Transplantation	Chinese core journal of science and technology, core version of CSCD, core journal of Peking University, WJCI, CA, Scopus, JST, CMCC, MPRIM, ULRich, etc.
Chinese Journal of School Health	Chinese core journal of science and technology, core journal of Peking University, WJCI, CA, AJ, Scopus, IC, CABL, etc.
Chinese Journal of Nursing Education	Extended version of CSCD, core journal of Peking University, Chinese full-text journal database WJCI, Scopus, etc.
Drug Evaluation Research	Chinese core journal of science and technology, CA, Scopus, IC, Ulrich, CAB, GH, etc.
Chinese Journal of Experimental Traditional Medical Formulae	Chinese core journal of science and technology, core version of CSCD, core journal of Peking University, T1-level excellent traditional Chinese medicine science and technology journal, WJCI, CA, Scopus, etc.
Journal of Army Medical University	Core version of CSCD, CA, AJ, JST, WPRIM, DOAJ, CAB, IC, etc.
Chinese Medical Ethics	Chinese core journal of science and technology, Scopus, JST, WPRIM, Ulrich, AML, etc.
Journal of Medical Pest Control	Chinese core journal of science and technology, Scopus, Chinese core journals (selected), etc.

5.3 The Situation of the Editorial Board Team

The editorial board members are the gatekeepers of the academic quality of scientific and technological journals and play an important role in improving the quality of

journals and expanding the influence of journals[10]. The editorial board members have a certain degree of comprehensiveness in disciplines and geographical breadth. For example, due to the comprehensive positioning of the journal, the "Journal of Army Medical University" has a more prominent general practice nature. Another example is that the editorial board experts of "Organ Transplantation" are deeply involved in many fields such as kidney, hepatobiliary and pancreatic, ophthalmology, and immunology. In addition, the overall distribution of the editorial board shows the characteristic of wide institutional distribution. Most of the editorial board members are scattered in various scientific research institutes and medical institutions across the country, such as "Chinese Journal of School Health" and "Drug Evaluation Research". The website of "Journal of Medical Pest Control" even directly indicates the regional distribution of the editorial board members, making the breadth of the distribution area more intuitive. Due to the particularity of the journal, most of the editorial board team of "Journal of Army Medical University" are experts from the Army Medical University and its affiliated hospitals. In addition, in terms of regional distribution, the editorial board team also includes some overseas experts. For example, in "Chinese Journal of General Surgery", "Chinese Medical Ethics", "Journal of Army Medical University", and "Chinese Journal of Nursing Education" . At the same time, the age structure of the editorial board is relatively reasonable. Each journal has young and middle-aged editorial board members participating to varying degrees.

5.4 Analysis of Content Characteristics

In general, as for the content of the publications, the journals investigated in this survey basically have a certain influence in their respective fields, the research fields of some journals are relatively subdivided or at the forefront, playing a decisive role in this field and having an important role in capturing the academic forefront and development trends. For example, "Chinese Medical Ethics" is one of the few large-scale special issues in China in the fields related to medical ethics and bioethics. Another example is the journal "Organ Transplantation", which has columns such as guidelines and consensus, expert forum, academic review, and transplantation frontier. It involves the current situation, trends and guidelines in the organ field, and has an important leading role in the field of organ transplantation journals. In addition, the investigated journals have actively explored internationalization. For example, the author group of the journal "Chinese Journal of General Surgery" also includes overseas authors. The "Chinese Journal of General Surgery" has columns such as international online and AME scientific research time to publish articles and surgical videos of overseas authors. The "Chinese Journal of Nursing Education" has a column of "Learning from Others", and the published papers focus on the current situation, requirements, strategies, etc. in the relevant fields around the world.

5.5 Analysis of Editorial Quality Norms

All the journals surveyed have complete copyright pages, English abstracts, English bibliographies, references, etc. The official websites of the journals are all relatively

personalized, allowing readers to selectively search for the content they need. For example, most journals can directly view the Chinese and English bibliographies and abstracts of articles online. A few journals only have English bibliographies or abstracts after PDF download. For example, for "Journal of Medical Pest Control", only the bibliography is available in English when viewed online, and for "Chinese Medical Ethics", only the English bibliography and abstract are available in PDF format.

6 Implications and Thoughts for Domestic Chinese Medical Journals

6.1 Perfect Publication Ethics and Attach Importance to Relevant Norms

Publication ethics runs through the entire publication process and is the publication moral principles and norms that scientific researchers and editors and publishers should jointly abide by. In recent years, China has also paid more and more attention to the construction of academic integrity. For example, in 2019, the China Association for Science and Technology and the Publicity Department of the Central Committee jointly issued the Opinion on Deepening Reform and Cultivating World-Class Scientific and Technological Journals[11], indicating that it is necessary to strengthen and improve the content production check mechanisms such as three reviews and three proofreadings and anonymous manuscript review for journals, establish an integrity system for paper authors and journal practitioners, and strengthen the bottom line of academic integrity and publication ethics.

6.2 Ensure Content Quality and Patiently Explore Characteristics

Content is the lifeline of journal quality. In this survey, each journal has a certain influence in the corresponding field or has its own unique content. Ensuring content quality to establish the journal's reputation and exploring the characteristics of the publication to establish the uniqueness and irreplaceability of the publication is particularly important for the publication to enter well-known domestic and foreign databases and for the long-term development of the journal. Content quality can be achieved through the organic cooperation of various entities. The editorial board team should provide good guidance in the general direction, the review team should ensure the quality of the papers, and the editing team should do a good job in refining aspects such as manuscript sources, article expression and norms to achieve quality control and reputation building of the publication.

6.3 Actively Build Websites and Develop Multiple Channels

An independent website is an important business card for the brand expansion of academic journals. In this survey, the journal website construction is in good condition. The website pages are beautiful, it is convenient to read papers, and the sections are

quite distinctive, which is helpful for better dissemination of the papers. Nowadays, all major scientific and technological journals have opened public account platforms and operate them. Different operation strategies have been used according to the situation of the publications. With the rise of videos in various fields, journals should actively adapt to the development of the times, be sensitive to changes in the dissemination methods, and be committed to opening up broader channels for academic dissemination and communication, establishing a broader reader group, and effectively exerting the effectiveness of the journal.

6.4 Based on Internationalized Development, Expand International Vision

Internationalization plays an irreplaceable role in absorbing high-quality manuscript sources, expanding the influence of papers, realizing the sharing and exchange of academic achievements, and even constructing the right to speak[12]. In this survey, the internationalization of journals is mostly limited to external dimensions such as the editorial board team and attention to global field progress. Although all are equipped with English abstracts, there are still certain limitations. However, the internationalization of scientific and technological journal content is the core element and the ultimate goal, and the internationalization of aspects other than the content of scientific and technological journals is the basis and external manifestation. The two are closely related and complementary. Therefore, journals can first explore internationalized development from the external manifestation. After being included in influential domestic and foreign databases, the database and the journal can gradually and collaboratively explore the path of in-depth internationalization.

6.5 Pay Attention to the Frontiers of the Field and Facilitate Information Transmission

Among the journals investigated this time, they all showed concern for the frontiers and development trends of the field. Some journals consciously took on the responsibility of integrating and disseminating relevant information, and carried it out with different strategies, such as the publication of expert guidelines and consensus articles, the integration of field information on the official website, and the publication of popular science articles on the WeChat public account platform. The concern of journals for the development trend of the field has an impact on the published content. More importantly, this kind of consciousness in disseminating relevant information has fully exerted the function of academic exchange and dissemination of journals, which plays an irreplaceable role in the establishment of the journal's reputation, the confirmation of its influence in the field, and even the development of the entire field. Therefore, journals should actively pay attention to the frontiers and development trends of the field, and actively utilize the platform and information advantages of the publication to facilitate the transmission of cutting-edge information.

7 Conclusions

Expanding the influence of journals globally is the inevitable way for journals to seek long-term development. Being included in well-known domestic and foreign databases is, on the one hand, an recognition of journal construction, and on the other hand, an important path for journals to seek sustainable development. In this era of artificial intelligence with everything interconnected, the paths and strategies of dissemination have become increasingly important for journals. Dimensions such as the extension of the dissemination platform through database inclusion, the exploration of the audience of publications through digital dissemination channels, and the refinement and improvement of rules through statements of publication ethics and moral norms cannot be ignored. Domestic medical journals should analyze and learn from the successful paths of journals with a high level of internationalization. Based on ensuring content quality, they should create journal characteristics, promote website construction, explore multimedia development, and pay attention to academic frontiers and hotspots, so as to conform to the trend of the times and seek their own development.

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References

1. Wen JX, Ning B. (2023) A study on the proportion of papers from Chinese mainland published in SCI journals from Chinese mainland to SCI papers from Chinese mainland. *Sci. - Tech. Publ.*, 6: 122 - 126. doi:10.16510/j.cnki.kjycb.20230628.003.
2. Institute of Party History and Literature Research of the Central Committee of the Communist Party of China. (2021) Selected Important Documents since the Nineteenth National Congress of the Communist Party of China: Volume 2. CPLP Publishing, Beijing.
3. Tang S, Cao B, Ji SJ, et al. (2023) Statistical analysis of Chinese open access journals in Chinese included in DOAJ. *Sci.-Tech. Publ.*, 1: 124-133. doi:10.16510/j.cnki.kjycb.20230131.001.
4. Tan BJ. (2014) The current situation and analysis of open access of Chinese medical journals - taking the journals included in DOAJ as an example. *Chin. J. Sci. Tech. Period.*, 25(9): 1113 - 1116. doi:10.3969/j.issn.1001-7143.2014.09.004.
5. Zhu C, Li J. (2011) The current situation of Chinese medical journals included in important international databases and suggestions for improving the international status of Chinese medical journals. *Chinese J. Med. Libr. Inf. Sci.*, 20(7):1-7. doi:10.3969/j.issn.1671-3982.2011.07.001.
6. Du XY, Li HX. (2022) Research on the digital academic service model of Elsevier and its enlightenment. *Chinese J. Sci. Tech. Period.*, 33(8): 1065 - 1074. doi:10.11946/cjstp.202205020341.
7. Trapp JV. (2020) The new Scopus CiteScore formula and the Journal Impact Factor: a look at top ranking journals and middle ranking journals in the Scopus categories of General

- Physics and Astronomy, Materials Science, General Medicine and Social Sciences. *Phys Eng Sci Med*, 43(3):739 - 748. doi:10.1007/s13246-020-00903-1.
8. Parse RR. (2016) Scientific Merit: Integrity in Research. *Nurs Sci Q.* 29(1):5. doi: 10.1177/0894318415614626.
 9. Jin XY, Wang GY. (2022) A comparative study on website construction of Chinese and foreign academic journals. *Sci. - Tech. and Publ.*, 1: 89 - 97. doi:10.16510/j.cnki.kjycb.2022.01.006.
 10. Liang XJ. (2020) Analysis and reflection on the current situation of Chinese scientific and technological journals being included in international retrieval systems. *Chinese J. Sci. Tech. Period.*, 31(1): 108 - 113. doi:10.11946/cjstp.201908230596.
 11. Four Departments. (2019). Opinions on Deepening Reform and Cultivating World - Class Scientific and Technological Journals. https://www.gov.cn/xinwen/2019-08/16/content_5421699.htm.
 12. Zhang YH, Bao F, Wu J, et al. (2019) Reflections on the international impact of Chinese STM journals. *Learned Publ.*, 32(2): 126 -136. doi: 10.1002/leap.1203.

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