

## EDITORIAL RESEARCH

# How to improve the communication effect of periodical group: A case study of anti-pandemic activities of traditional Chinese medicine periodicals

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## ABSTRACT

With the bilingual activities planned by China National Knowledge Infrastructure (CNKI) and Chinese medicine periodical group during the coronavirus disease 2019 (COVID-19) pandemic as a case, we sorted out the experience and problems in topic selection, content organization, editing, and publicity and presented some strategies to improve the communication effect of traditional Chinese medicine (TCM) periodical group. It is concluded that precise planning, high-quality resource integration, and bilingual publishing will contribute to the in-depth promotion of periodicals and the improvement of their communication.

**Key words:** periodical group, communication effect, traditional Chinese medicine, anti-pandemic activities, bilingual publishing

Academic journals shoulder responsibilities for spreading academic achievements, promoting academic exchanges, and leading academic frontiers.<sup>[1]</sup> Promoting the communication of academic journals and expanding the influence of quality content are the keys to the high-quality growth of journals.<sup>[2,3]</sup> There has been plenty of research on academic journal communication, with different research emphases in each period.<sup>[4-8]</sup> In the era of media convergence, studies offered various ways to enhance the communication of periodicals and improve the visibility of scientific research achievements.<sup>[9-13]</sup> However, most of them focused on cluster journals.<sup>[14-17]</sup> From the perspective of discipline and focusing on the promotion of communication power of Chinese

medicine journals through academic anti-pandemic activities, this study summarizes the experiences in topic selection and planning, content organization, editing and processing, and publicity, as well as problems that may lie, and present strategies to improve the communication of periodical group.

## EXPERIENCE IN IMPROVING THE COMMUNICATION EFFECT OF PERIODICAL GROUP

### *Focusing on Chinese characteristics and finding high-quality topics*


Traditional Chinese medicine (TCM) culture contains the essence of fine Chinese culture. Carrying forward TCM culture and expanding the influence of TCM will help enhance the soft power of the country. Sadly, considerable pressures still exist in TCM's endeavor to go overseas. Firstly, most countries in this world have not yet legally recognized TCM, which restricts its wide application. Secondly, the lack of international standards hinders TCM internationalization. Thirdly, despite having some foundation, TCM has only a limited ability to extend internationally due to language and tradition,

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which makes it harder for individuals living abroad to grasp TCM. It will take a long time for people from other countries to identify and use TCM.<sup>[18,19]</sup>

With its unique theoretical system and treatment methods, TCM has played an essential role in the fight against the coronavirus disease 2019 (COVID-19) pandemic in 2020. Back then, people around the world were aware of the diagnostic and therapeutic value of TCM. According to the statistics from the team of academician Zhang Boli, an expert of the Central Leading Group for COVID-19 Prevention and Control, TCM therapy was involved in the whole process against COVID-19 in 2020, and 91.5% of the diagnosed patients in China used TCM therapy, which greatly reduced the proportion of mild COVID-19 patients turning into severe symptoms, mortality, and the incidence of sequelae. As the pandemic raged on globally, TCM received unprecedented attention from the international community and embraced significant development opportunities. It is imperative to share the latest prevention and control measures and clinical experience on the frontline of the fight against the pandemic worldwide. At the call of the state, the journal community responded promptly<sup>[20]</sup> by planning topics<sup>[21,22]</sup> and selecting papers on COVID-19 pandemic. On January 31, 2020, China National Knowledge Infrastructure (CNKI) opened the Knowledge Service Platform for the Fight against COVID-19 (online publish first), and published the scientific research achievements in open access form in time. As of June 30, 2020, altogether 2802 academic papers from 293 medical journals have been published on the platform, covering all aspects from theoretical research and basic research to clinical diagnosis and treatment, including nearly 1000 papers related to TCM. As early as the end of 2013, CNKI launched the Journal Translation Project (JTP), attempting to boost international development and transformation of Chinese journals through bilingual publishing, two-way communication, and three-dimensional services.<sup>[23]</sup> There are no short of excellent articles on COVID-19 among the Chinese medicine journals on the JTP platform. Therefore, we would like to take this opportunity to publicize TCM journals and offer Chinese solutions for the development of human health.

The primary challenge for us, however, is how to select quality papers that best show the remarkable anti-pandemic effect of TCM and can be used to guide clinical practice on a global scale from the numerous published TCM papers. In April 2020, *Science* published a paper pointing out that many of the first batches of COVID-19 papers were biased in terms of experimental design, arguments, and reporting methods; the papers published afterward were short of innovative ideas, and some studies even focused on how to get the most

possible attention from the media.<sup>[24]</sup> Another challenge is how to publicize the papers and anti-pandemic experience of TCM through media so as to enhance the international influence of TCM and TCM journals.

### **Determining the topic through collaborative planning**

The China Association of Chinese Medicine (CACM) is the largest academic group of TCM in China with the longest history and it issued the first classified catalogue of TCM scientific journals (T1 and T2 journals). The World Federation of Chinese Medicine Societies (WFCMS) is the largest, most influential, and most authoritative academic organization of TCM in the world. The *Opinions on Deepening Reform and Cultivating World-class Sci-tech Journals*<sup>[25]</sup> points out that it is vital to strengthen the efforts of the societies to run journals and build a number of professional brand journals with international influence. In this context, CNKI hosted three planning meetings together with CACM, WFCMS, and 16 major TCM journals, including *Journal of Traditional Chinese Medicine*, *China Journal of Traditional Chinese Medicine and Pharmacy*, *Chinese Acupuncture & Moxibustion*, *Acupuncture Research*, and *World Chinese Medicine*. In the meetings, we discussed the selection and compilation plans of papers, and determined to interpret selected papers and introduce the latest progress of TCM against the pandemic globally with lectures on TCM. The societies and journals were mainly responsible for the academic content and expert invitation, while CNKI took charge of the production of the e-book and lectures and the global publicity.

### **Gathering high-quality papers with the help of experts**

To bring the valuable anti-pandemic experience to the world and give full play to the role of TCM in preventing the spread of the pandemic, we preliminary screened out papers with high academic and application value from 796 TCM papers published on the Knowledge Service Platform for the Fight against COVID-19 from January 29, 2020 to May 1, 2020. We paid special attention to papers with universal clinical guidance value, in other words, papers supported by scientific methodology, with specific prescriptions, comparison among prescriptions, clinical cases, clinical verification, or diagnosis and treatment guidelines and operation specifications issued by authoritative institutions. CACM also asked its T1 and T2 journals to recommend papers according to the inclusion criteria, and 251 articles were identified. The experts recommended by CACM and editorial boards of TCM journals strictly checked the selected papers from two aspects of academic content and quality, as well as writing level and standard, and 146 qualified papers were chosen. Then, chief editor academician Huang Luqi, together with 17 professors and researchers from the

Chinese Academy of Sciences and the China Academy of Chinese Medical Sciences and chief physicians from grade-A tertiary hospitals reviewed these papers again and 70 papers in 29 journals were finally included.

English is still the dominant language in academia. When the authors and editorial offices approved the chosen papers, CNKI translated them into English to help break down barriers to international communication. These papers were published in a bilingual collection named *Traditional Chinese Medicine against COVID-19* (as shown in Figure 1), with a preface written by academician Huang Luqi. This collection of papers was published in the form of e-book with ISBN on multiple platforms, including Bilingual Database of Excellent Chinese Academic Journals, CNKI Overseas Electronic Library, CNKI Dacheng Bianke, and CNKI Research Platform. In addition, we gave the authors and the editorial offices with the paper inclusion certificate and the paper inclusion notice, which received unanimous welcome.<sup>[26]</sup> The e-book focused on the clinical diagnosis and treatment of COVID-19, including cases with apparent effectiveness or cure of clinically severe or critical patients, elderly or children patients and patients with complex complications that were difficult to handle in the world. These achievements, underpinned by both scientific methodologies and objective clinical statistical evidence, have significant application value and provide a solid basis for TCM to serve the world.

### **Channeling multiple ways to enhance communication**

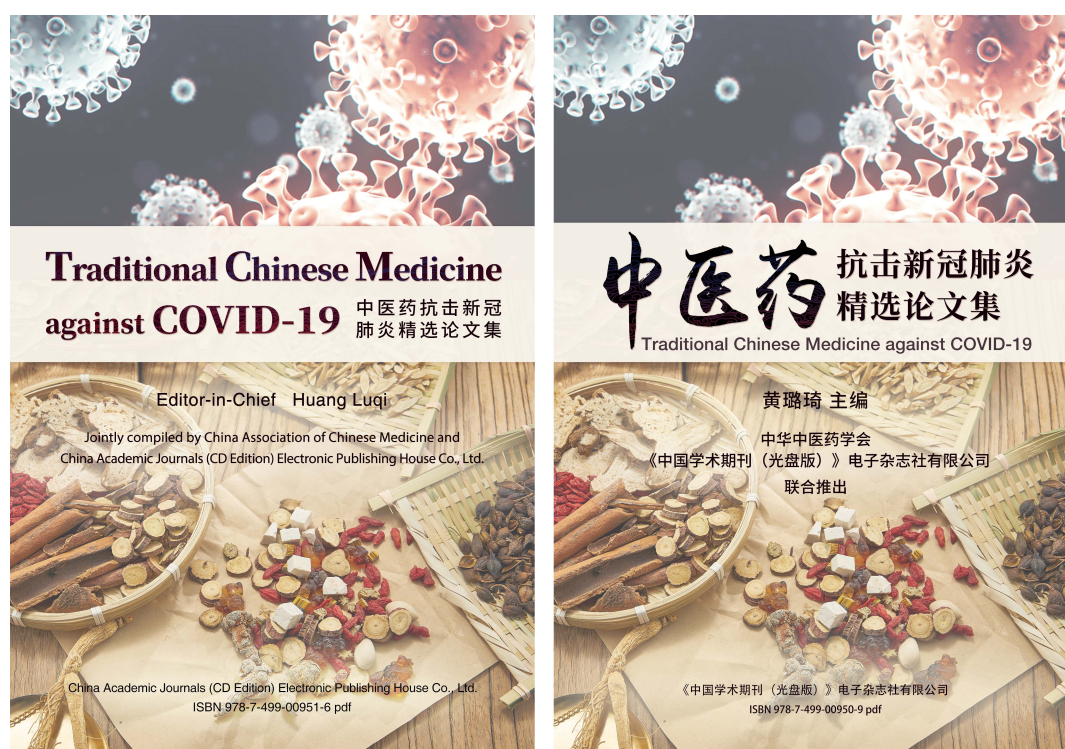
In a bid to offer TCM experience and bring the e-book for the world, we have launched three lecture series of Global Lectures on Progress of COVID-19 Treatment with TCM. In the first lecture series, we showed four academicians' and experts' reports on *Global Live Broadcast of Experts' Experience in TCM against COVID-19* from WFCMS. In the second lecture series, we invited 16 Chinese TCM experts, including author representatives of the e-book and those who had made remarkable achievements in the fight against COVID-19 to elaborate on the latest achievements of TCM in the fight against the pandemic. The lecture series, lasting from April 28 to June 30, 2020, were broadcast alive on CNKI in the way of simultaneous Chinese and English, attracting about 68,000 views from 18 countries and regions. Given the sound effects of the previous lecture series and the raging pandemic, we planned the third lecture series, hoping to keep enhancing the international influence of TCM. In the third lecture series, 17 well-known TCM experts from China, the US, France, Italy, the Philippines, and South Africa, were invited to share their achievements in their national fight against COVID-19. The three lecture series provided a thorough introduction to the most recent developments in TCM in China and other nations in the fight against

the COVID-19 pandemic, covering theory and practice, prevention and treatment, and treatment and rehabilitation, offering a stereoscopic interpretation of the anti-pandemic successes in an online setting. Besides, leaders from well-known TCM journals in China, like *Journal of Traditional Chinese Medicine*, *China Journal of Chinese Materia Medica*, and *Chinese Acupuncture & Moxibustion* personally presided over the lectures, which improved the global influence of China's TCM journals.

After the launch of the e-book, CNKI, together with the CACM, WFCMS, and TCM journal editorial offices, held two forums themed by Traditional Chinese Medicine Treatment Under the Global Pandemic—Knowledge Service and Expert Forum, facing the overseas market at the end of 2020. We invited academician Huang Luqi as the opening guest to comment on the guiding significance and value of *Traditional Chinese Medicine against COVID-19*, and invited authors of the e-book to interpret their achievements and clinical applications. Since the majority of the forum registrants were non-Chinese, simultaneous interpretation was provided.

To maximize the communication effect, multiple channels were at play, including platform, multimedia, and institutional and personal promotion, as well as market activities. In terms of platform, publicity pictures, and activity links were presented in the form of banners or carousels on all major platforms on which e-books, lectures, and forums were published. In addition, we set up links on CNKI's global database platforms to attract traffic, including industry platforms such as CNKI Science and Technology Products Mall, Public Health Knowledge Service Platform, General Knowledge Resource Database of Food and Drugs, and General Knowledge Database of Chinese Hospitals. With regards to multimedia, we published promotional texts, pictures, or videos on overseas social media like Facebook, Twitter, YouTube, TikTok, and LinkedIn, as well as domestic media like WeChat, Weibo, Toutiao, and NetEase. In particular, we made full use of WeChat official accounts such as CNKI overseas services, CNKI Tongfang, and CNKI Medical Online, as well as important WeChat groups. As to institutional promotion, we contacted overseas TCM institutions, including universities, research institutes, academic associations, and hospitals, by email or telephone; in China, we joined hands with CACM, WFCMS, editorial offices of various medical journals, domestic medical institutions, and various major hospitals to carry out publicity activities. CNKI's regional managers in China also shared the information with their responsible branches. About individual promotion, a global database of TCM scholars was built based on author information of the Web of Science and CNKI database and emails were sent to those scholars. Lastly, as to marketing





**Figure 1.** English version (left) and Chinese version (right) of *Traditional Chinese Medicine against COVID-19*. COVID-19: the coronavirus disease 2019.

activities, e-books and lectures were further promoted in the Cloud Book Exhibition of the 27<sup>th</sup> Beijing International Book Fair, overseas promotion activities of 2021 series of books on Advances in Medical Science, and CNKI eBooks Express.

Owing to these promotion activities, up to now, the *Traditional Chinese Medicine against COVID-19* has received more than 45,000 views and gained the attention of readers from 22 countries and regions including the US, the UK, Canada, New Zealand, Thailand, and South Korea, as well as China's Hong Kong, Macao, and Taiwan. The editorial board member of the *European Journal of Oriental Medicine* even proposed to write a review for the e-book. As of June 20, 2021, the three lecture series have attracted nearly 140,000 views from 38 countries and regions around the world. The forum was broadcast online about 15,000 times in 13 countries and regions. Among the registrants, 57% are non-Chinese, 58% are from scientific research institutes, and 38% are from hospitals and clinics. CACM formed a special report on the above work and reported it to the National Administration of Traditional Chinese Medicine. Meanwhile, CNKI reported the work to the Department of International Cooperation of the Publicity Department of the Communist Party of China (CPC) through the China Periodicals Association, and to SCI Mall Information of the China Association for Science and Technology (CAST) through the Journal Office of the Service Center for Societies of CAST. CAST has given us much applause to the work we have done.

## ENLIGHTENMENTS ON IMPROVING THE COMMUNICATION OF PERIODICALS

### *Accurate planning is the basis of improving communication*

Three principles were followed in our planning work. (1) Themes must show value orientation. Since the outbreak of COVID-19, the international community has shown much concern to the anti-pandemic effect of TCM. As a traditional treasure, TCM is gaining growing attention from the overseas markets. To carry forward China's traditional culture and contribute to the global fight against the pandemic, we determined the theme "Traditional Chinese Medicine against COVID-19". (2) Quality should be strictly controlled. Under the quality check by journal offices, editorial board of experts, and academician Huang Luqi, papers with both scientific and application value have been selected, which transforms academic value into social value and creates outstanding social benefits. (3) Publishing services should be strengthened. The integrated publishing mode of "bilingual e-book + video lecture + forum + multimedia publicity" improves the communication effect of scientific research achievements. To achieve precise planning, we have formed a communication working group with the CACM, WFCMS, and the journal editorial offices and hosted regular meetings with correspondents. The members of the working group participated in the whole process of planning and

production of the e-book, preparation and recording of lectures and forums, and publicity, and ensured that these activities were put in place as scheduled with high standards and quality.

### **Integration of high-quality resources is the key for communication enhancement**

Our activity embodies the integration of high-quality resources at three levels: periodicals, experts and products. At the journal level, the powerful journal group formed by CACM, WFCMS, and 16 major TCM journals is the cornerstone of the smooth implementation of these activities. At the expert level, the papers are checked layer by layer by the editorial board of each editorial office and experts from the Chinese Academy of Sciences, the China Academy of Chinese Medical Sciences, and other units, ensuring the scientificity and rigorosity of the e-book. At the product level, the papers in the collection are screened out from nearly 800 papers on the treatment of COVID-19 with TCM first published on CNKI, and finally, 70 papers in 29 journals are chosen, which are superior in this field; in the lectures and forums, 48 well-known experts in the field of TCM from six countries are gathered and they have delivered 44 wonderful reports, and the audience has understood the latest progress in the field of TCM in China and other countries in response to the COVID-19 and other common diseases. We have gathered high-quality resources while forming a scale effect. We have generated good market feedback, expand the accessibility of China's TCM journals, and enhanced their influence.

### **Bilingual publishing is a booster for communication growth**

On July 21, 2020, General Secretary Xi Jinping presided over a meeting for entrepreneurs in Beijing and pointed out that "a new development paradigm should be gradually formed in which the domestic circulation plays a leading role and the domestic and international circulation reinforcing each other".<sup>[27]</sup> For China's journals, bilingual publishing is an effective way to give consideration to both foreign and Chinese markets and implement the national strategy of dual circulation.<sup>[28]</sup> Since most of the journals in China are published in Chinese, bilingual publishing can help attract excellent Chinese scientific research achievements and expand the scope of manuscript sources and readership. By breaking language barriers, bilingual publishing can also meet the needs of foreign countries to understand China's academic progress and thus enhance the international influence of China's scientific research achievements.<sup>[29]</sup> To cater to both Chinese and foreign markets, we have adopted the bilingual form in the e-books, lectures, and forums for publicity, and finally we obtained the readers and audiences from the two markets. JTP, after years of

development, has emerged as an intensive platform to help journals improve the content quality, publishing quality, and dissemination quality thanks to its knowledge base, personnel reserves, and a huge market, and won widespread praise in the journal community.<sup>[30]</sup> Bilingual publishing has also attracted national attention. The *Opinions on Deepening Reform and Cultivating World-class Sci-tech Journals*<sup>[25]</sup> proposed that efforts should be made "to encourage Chinese academic journals to provide long abstracts of papers in English and foreign-language academic journals to provide long abstracts of papers in Chinese; strengthen the construction of foreign-language or bilingual academic websites of journals; and support academic journals to establish foreign-language or bilingual academic journals according to the needs of discipline development and academic exchanges." In the context of the dual circulation strategy, bilingual publishing will help China's scientific journals to better serve scientific and technological innovation in both domestic and international markets, to facilitate the synergistic development of economy and society, and to contribute to the community with a shared future for mankind.

## **CONCLUSION**

With the bilingual activities jointly planned by CNKI and Chinese medicine periodical group during the COVID-19 pandemic as a case study, we sorted out the experience and problems in topic selection, content organization, editing, and publicity and presented some strategies to improve the communication effect of TCM periodical group. It is concluded that precise planning, high-quality resource integration, and bilingual publishing will contribute to the in-depth promotion of periodicals and the improvement of their communication. Future research can focus on ways to enhance communication effect of journal group of non-TCM disciplines or even cross-disciplines.

## **DECLARATIONS**

### **Author contributions**

Du HX: Conceptualization, Writing—Original draft. Xiao H: Conceptualization, Writing—Review and Editing. Li JJ: Formal analysis, Writing—Original draft. Shi XM: Resources. Li J: Investigation.

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### **Conflict of interest**

Hong Xiao is the Editor-in-Chief of the journal. The article was subject to the journal's standard procedures, with peer review handled independently of these members and their research group.

## REFERENCES

1. Xiao H, Ma B. [The effect and development vision of academic journals in the "Internet +" era]. *Chin J Sci Tech Period.* 2015;26(10):1046–1053.
2. Xiao H. [On the quality elements and high-quality development of scientific journals in the new era]. *Chin J Sci Tech Period.* 2020;31(10):1153–1163.
3. Zhou HL, Leng HM. [Thoughts on learning the spirit of the 20th CPC National Congress and promoting the high-quality development of sci-tech journals]. *Acta Editol.* 2023;35(1):8–11.
4. Wan DS, Chen YH. [Present situation and the development tendency of academic journal communication research]. *J Sichuan Univ Sci Eng -Soc Sci Ed.* 2013;28(1):101–106.
5. Xu XJ. [Application of h-index in evaluating journal network transmission power]. *J Intell.* 2012;31(11):66–70.
6. Xie WL, Wang SL. [The communication ability and its construction strategy in academic journals]. *Chin J Sci Tech Period.* 2015;26(4):425–430.
7. Lyu ZJ, Zhu N, Qu F, Liu B, Chang DY. [Discussion on evaluation elements of the communication power of scientific journals]. *Chin J Sci Tech Period.* 2020;31(8):923–928.
8. Guo YB. [Research progress on the communication power of academic journals]. *J Nanjing Univ Aeronaut Astronaut-Soc Sci.* 2022;24(2):113–118.
9. Guo CZ, Bai YH, Cui TJ. [Beyond the paper, serve the science.: *Light. : Science & Applications*' practice on fostering China's flagship journal]. *Acta Editol.* 2019;31(1):1–6.
10. Tao H, Chang ZQ, Zheng JW, Ye XY, Wang QM. [Media convergence spreading mode of Weibo, WeChat, and client-side: a case study of geoscience scientific journals]. *Chin J Sci Tech Period.* 2020;31(9):1028–1034.
11. Shi QH. [Process reengineering of academic journal editors under the background of media convergence]. *J Liaoning Tech Univ-Soc Sci Ed.* 2018;20(1):77–80.
12. Meng C, Hu GH. [Diversification of communication paths of academic journals in the era of media integration]. *China Publ J.* 2022;7:37–41.
13. Zhang Y, Li MD. [Convergence media development of agricultural popular science journals for agricultural information dissemination: Based on the investigation of eight major agricultural counties in Shaanxi Province]. *Chin J Sci Tech Period.* 2022;33(1):84–90.
14. Liu J, Zhang, X, Yan S. [Clustering development model of academic journals in university press: Taking Journal Publishing Center of Tsinghua University Press for example]. *Acta Editol.* 2016;28(6):561–565.
15. Mang Y, Yang L, Wang XF. [Thinking and practice on cultivating world-class press: Review and prospect about cluster development of Chinese Laser Press in ten years]. *Chin J Sci Tech Period.* 2020;31(10):1210–1216.
16. He ZM, Yang Y, Zhang Y, et al. [Clustering development of Chinese scientific journals: Taking Chinese laser press as an example]. *Chin J Sci Tech Period.* 2022;33(11):1462–1469.
17. Liu B, Wei JM, Jin D, Shen XB, Pan Y, Xu Y, Zhao W. [Improve the management and operation level of cluster journals and empower the high-quality development of journals]. *Acta Editol.* 2022;34(04):363–368.
18. Jiang L, Sha S. [Strengthening cultural confidence of TCM periodicals to promote inheritance and development of TCM culture]. *Acta Editol.* 2022;34(05):488–493.
19. Liang LN, Xu K, Gao Y. [Status and paths of overseas spread of traditional Chinese medicine]. *World Chin Med.* 2022;17(21):3121–3125.
20. Wu T, Wang Q, Luo XQ. [Analysis of roles and activities of Chinese stomatological journals in epidemic prevention and control on COVID-19]. *Chin J Sci Tech Period.* 2020;31(03):229–235.
21. Li P, Ni J, Liu HX, Ren SL, Liu B, Wei JM. [Topic selection and channel analysis of thematic science communication: a case study of medical paper communication in China during COVID-19 pandemic]. *Acta Editol.* 2020;32(06):663–668.
22. Jia ZJ. [Relying on the advantages of platform to create characteristic anti-epidemic column: Practice of "COVID-19 prevention and control column" in general clinical medical journals]. *Chin J Sci Tech Period.* 2020;31(11):1357–1362.
23. Xiao H. [Facing the world to establish international leading academic journals]. China Press, Publication and Broadcasting Network. Updated December 29, 2016. Accessed December 20, 2022. <https://www.chinaxwcb.com/info/39592>
24. London AJ and Kimmelman J. Against pandemic research exceptionalism. *Science.* 2020;368(6490):476–477.
25. China Association for Science and Technology, the Publicity Department of the CPC, the Ministry of Education, the Ministry of Science and Technology. [Opinions on Deepening Reform and Cultivating World-class Sci-tech Journals]. Updated August 16, 2019. Accessed December 20, 2022. [https://www.cast.org.cn/art/2019/8/16/art\\_79\\_100359.html](https://www.cast.org.cn/art/2019/8/16/art_79_100359.html)
26. Chen YM, Wang JZ, Cong M, Sun SY, Wang HX. [Precise publishing strategies for medical journals during the COVID-19 epidemic]. *Acta Editol.* 2021;33(03):305–308+312.
27. Xi JP. [Speech at the meeting of entrepreneurs]. Xinhuanet. Updated July 21, 2020. Accessed September 1, 2020. [http://www.Xinhuanet.com/politics/leaders/2020-07/21/c\\_1126267575.htm](http://www.Xinhuanet.com/politics/leaders/2020-07/21/c_1126267575.htm)
28. Xiao H. [Bilingual publishing of scientific journals from the perspective of dual-circulation strategy]. *Chin J Sci Tech Period.* 2020;31(09):973–979.
29. Yu ZL, Ma Z, Tian RQ. [Developing S&T journals in Chinese and English bilingual edition contributes to transfer science center]. *Acta Editol.* 2019;31(03):237–241.
30. [Spreading and displaying China's excellent academic achievements through bilingual publishing and enhanced services]. China Press, Publication and Broadcasting Network. Updated December 27, 2016. Accessed December 20, 2022. <http://data.chinaxwcb.com/epaper2016/epaper/d6415/d8b/201612/73974.html>