

## A Study on the Application of New Media in the Digital and Networked Development of Journals: Postprint

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### Abstract

**Objective:** To investigate the current status of digitalization, networking, and new media utilization among the journal series of the Chinese Preventive Medicine Association, and to draw lessons from the digitalization processes and experiences of comparable journals, thereby facilitating the digital and networked development of this journal. **Methods:** Sixty-nine journals from the Chinese Preventive Medicine Association series were selected as survey subjects. Through Baidu search, CNKI search, WeChat/Weibo search, telephone interviews, and other approaches, we examined the submission methods, online-first publication status, WeChat public account and Weibo usage, as well as the presence of independent websites and whether these websites provided full-text publication. All collected data were entered into Excel spreadsheets for statistical analysis. **Results:** (1) Submission methods; (2) Website construction status; (3) Online-first publication status; (4) Open access status; (5) WeChat public accounts and Weibo. **Conclusion:** The digitalization and networking of the Chinese Preventive Medicine Association journal series have made certain progress, yet several issues remain that require improvement.

### Full Text

#### Abstract

**Objective:** To investigate the current state of digitization and networking, as well as new media usage, among the journal series of the Chinese Preventive Medicine Association, drawing on the experiences of peer journals to promote the digital and networked development of our own journal. **Methods:** Sixty-nine journals from the Chinese Preventive Medicine Association series were selected as survey subjects. Investigation methods included Baidu search, CNKI

search, WeChat and Weibo searches, and telephone inquiries to examine submission methods, online priority publishing status, WeChat official account and Weibo usage, and whether journals had independent websites with full-text publication. All data were entered into Excel for statistical analysis. **Results:** (1) Submission methods; (2) Website construction status; (3) Online priority publishing status; (4) Open access status; (5) WeChat official accounts and Weibo. **Conclusion:** The Chinese Preventive Medicine Association journal series has achieved certain progress in digitization and networking, though persistent issues remain that require improvement.

**Keywords:** new media; journal digitization; publishing industry; network construction

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## Introduction

Digital publishing has developed rapidly in China, with its industrial scale continuing to expand. The *13th Five-Year Plan for Press, Publication, Radio, Film and Television Development* released in September 2017 reported that during the 12th Five-Year Plan period, digital publishing revenue exceeded 440 billion yuan, representing a 318.7% increase from 2010 and accounting for 20.5% of total press and publishing industry revenue—ranking second in the industry and driving 5.1% of growth in press and publishing. Unlike traditional print journals limited by page constraints, digital publishing can provide additional supplementary materials, yet domestic journal digitization still exhibits deficiencies. As our journal belongs to the Chinese Preventive Medicine Association series, this research group selected journals from this series to investigate their current digital and networked status and new media usage. Through this survey, we aim to learn from the digitalization processes and experiences of other journals to facilitate the digital and networked development of our own journal.

### 1.1 Survey Subjects

The survey subjects comprised the journal series of the Chinese Preventive Medicine Association, totaling 69 journals. These included *Chinese Preventive Medicine Journal*, *China Public Health*, *Chinese School Health*, *Chinese Rural Health Service Management*, *Chinese Journal of Disease Control & Prevention*, *Chinese Journal of Hypertension*, *Chinese Journal of Industrial Medicine*, *Chinese Journal of Biologicals*, *Maternal and Child Health Care of China*, and various other journals covering different fields. Due to space limitations, all titles will not be listed here.

## 1.2 Survey Methods

Investigation methods included Baidu search, CNKI search, WeChat and Weibo searches, and telephone inquiries to examine the selected journals' submission methods, online priority publishing status, WeChat official account and Weibo usage, and whether they had independent websites with full-text publication. All data were entered into Excel spreadsheets for statistical analysis.

## 2.1 Submission Methods

The survey results showed that among the 69 Chinese Preventive Medicine Association series journals, 54 (78.3%) editorial offices used online submission systems; 3 (4.3%) used both online and email submission, including one using a non-editorial system for one-way submission; 12 (17.4%) used email submission only; and none used paper submission.

## 2.2 Website Construction Status

Among the 69 surveyed journals, 63 (91.3%) had independent websites (including submission platforms on major full-text databases such as CNKI), while 6 (8.7%) had no website.

## 2.3 Online Priority Publishing Status

Taking CNKI's online priority publishing as an example, the status among the 69 journals was as follows: 46 journals (66.67%) had online priority publishing identifiers, while 23 (33.33%) did not. Among the 23 without priority publishing identifiers, 12 had "online first" identifiers and 11 had neither.

## 2.4 Open Access Status

Regarding full-text open access (OA) among the 69 journals: 32 journals (46.4%) uploaded full texts with OA on their websites, while 23 (33.3%) published only abstracts.

## 2.5 WeChat Official Accounts and Weibo

Survey results indicated: (1) For WeChat official accounts, 36 of the 69 Chinese Preventive Medicine Association series journals had established official accounts, representing a 52.2% adoption rate, while 33 (47.8%) had not; (2) For Weibo accounts, 11 journals (15.9%) had established Weibo accounts, while 58 (84.1%) had not.

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### 3. Discussion

The integration of new media has accelerated the digitalization and networking of journals, helping to break away from the rigid image of traditional print publications. Digital publishing, unconstrained by the page limitations of traditional print journals, can provide more supplementary materials and has transformed conventional publishing workflows, offering superior capabilities in information organization and production, editorial review and revision, production management, and dissemination channels and forms. This study investigated the digital and networked status and new media usage among the Chinese Preventive Medicine Association journal series to learn from peer experiences and promote our own journal's development.

#### 3.1 Submission Methods

Journal submission methods have evolved through three distinct stages: paper submission, email submission, and online submission. Paper submission was time-consuming and labor-intensive, resulting in low operational efficiency for editorial offices. Email submission represented a significant leap forward from paper submission, enabling paperless office work through simple electronic file forwarding. Online submission allows authors to send manuscripts directly to editorial offices through web interfaces, primarily in two forms: either the editorial office receives submissions through a network interface after authors submit, or authors submit through manuscript processing systems that enable all editorial staff to conduct reviews online.

Our survey found that among the Chinese Preventive Medicine Association series journals, 54 editorial offices used online submission systems, 3 used both online and email submission (including one using a non-editorial system for one-way submission), 12 used email only, and none used paper submission. This indicates that paper submission has become obsolete, and online editorial systems have become basically universal among these journals. However, some have noted that networking and digitization represent a double-edged sword, with incidents of email and online system password theft or hacking already occurring, resulting in stolen author information. Therefore, cybersecurity must be prioritized during journal networking and digitization, with daily maintenance strengthened to effectively safeguard the information security of editorial offices and authors.

#### 3.2 Website Construction Status

Among the 69 surveyed journals, 63 had independent websites (including submission platforms on major full-text databases such as CNKI), with 54 (78.3%) editorial offices adopting online submission. Some journal websites provided substantial information with comprehensive functions including information release, online manuscript processing systems, online issue publication, and integrated services, representing relatively high website quality. These editorial offices

could customize column settings according to their journals' characteristics and requirements, though such websites require dedicated funding and personnel for regular maintenance and updates. Overall, most journals have gradually recognized that website construction represents an inevitable trend for journal development and an important pathway for expanding influence. Using journal websites as extensions, developments, and supplements to print journals can accelerate dissemination speed, enabling authors and readers to gain more comprehensive and in-depth understanding of journals while breaking through temporal and spatial constraints to achieve resource concentration and sharing in network environments, thereby further strengthening communication and connections between editorial offices and authors, readers, and reviewers [1].

### 3.3 Online Priority Publishing Status

Online priority publishing refers to the advance release of finalized manuscripts on qualified digital publishing platforms before formal printing, provided this complies with national publishing policies and regulations. Currently, domestic journals primarily implement online priority publishing through cooperation with databases (CNKI, Wanfang, VIP, etc.), though some also implement it on independently established websites. This study found that among the 69 Chinese Preventive Medicine Association journals, over 66.67% had achieved priority publishing on CNKI. Among the 23 journals without priority publishing identifiers, half had achieved “online first” status. However, differences exist between online priority publishing and online first publication: priority publishing occurs before print publication, and the priority-published version may undergo content revisions later, whereas online first means the content is finalized and identical to the print version, representing its first online publication. Although both involve online dissemination, priority publishing occurs earlier than online first.

For authors, online priority publishing enables earlier dissemination of research findings in paper form, accelerating the 传播 of their work and allowing readers to access it sooner. Given the lengthy publication delays in traditional journals—from submission through multiple review and editing rounds to layout and printing—core journals often experience publication lags of 6–8 months. Online priority publishing can advance publication by weeks or even months, effectively shortening publication delays, establishing authors' priority claims more quickly, and enabling the fastest possible publication of cutting-edge research. It also meets authors' urgent needs for professional title evaluation, performance assessment, and research achievement recognition.

For readers, online priority publishing provides quicker access to the latest research findings in specific fields, offering immediate access to cutting-edge scientific information that helps determine research directions and enhance innovation capabilities. During CNKI' s online priority publishing process, basic information such as author affiliation, abstract, keywords, and classification codes must be completed, along with extended information including funding

sources, author biographies, document identifiers, and column names, as well as optional items like innovation points and priority recommendations. This information enhances article individuality, improves visibility, and facilitates readers' targeted article selection.

For journals, online priority publishing effectively expands influence, shortens publication delays, attracts higher-quality submissions, draws more readers, and contributes to increasing total citation frequency and impact factors. Research indicates that online priority publishing averages four months earlier than traditional print publication followed by online release, with higher download frequencies within one year after online publication. Thus, online priority publishing effectively enhances core competitiveness and international influence while promoting academic exchange. Rapid publication and dissemination accelerate the realization of research value and expedite the research-publication-new research cycle, fostering rapid scientific development.

However, current domestic online priority publishing faces certain limitations. First, regarding timing, many journals introduce priority publishing but often implement it only in the print month with content nearly identical to the final print version, offering minimal time advantage and deviating from the original purpose of priority publishing. Second, some journals maintain lax requirements, prioritizing speed over quality and resulting in incomplete information in priority-published versions or significant discrepancies from final published content, implementing priority publishing merely to meet author demands rather than as a systematic practice. Third, confusion persists between priority-published and final published versions, and although many journals have effectively addressed this issue using DOI codes, the phenomenon continues. Moreover, most journals' priority publishing remains confined within China with limited global recognition, requiring further efforts in this regard.

### 3.4 Open Access Status

Articles constitute the core of journal website information construction, directly impacting academic influence, website click-through rates, academic dissemination efficiency, and even editorial office profitability. Among the 69 surveyed journals, 32 provided full-text OA on their websites while 23 published only abstracts. Under traditional publishing models, research findings presented as academic papers, with copyright held by publishers, often became monopolized products of academic publishing groups. After print publication, papers uploaded to databases such as CNKI and Wanfang were not freely accessible, with full-text reading requiring payment. OA breaks these barriers, establishing a new model for academic paper reading by enabling all users to immediately and freely access research papers online [2]. This increases opportunities for research papers to gain attention and citations, thereby enhancing research visibility, facilitating academic exchange, and promoting the dissemination and citation of academic achievements and researchers' influence. Full-text online availability and online subscriptions can increase website traffic and citation

frequency. However, research shows that OA' s impact enhancement primarily manifests in the early period after OA publication, with the academic influence of OA and non-OA papers gradually converging over time [3]. Therefore, journals should upload full texts to their official websites but selectively implement OA based on their circumstances, balancing journal influence, publication costs, and revenue. Regardless of the OA strategy adopted, the goal is to maximize the advantages of networking and digitization to expand academic influence as much as possible without affecting economic benefits or publication costs.

### 3.5 WeChat Official Accounts and Weibo Usage

The emergence of new media such as WeChat and Weibo has transformed how people access information and generate knowledge innovation. In 2014, the central government issued the *Guiding Opinions on Promoting the Integrated Development of Traditional and Emerging Media*, and beginning in 2015, a media convergence pattern represented by “two micros and one terminal” (Weibo, WeChat, and APP clients) gradually took shape, with increasing penetration rates for Weibo and WeChat. WeChat official accounts feature large user bases combined with privacy, high reading freedom, convenient commenting, and strong interactivity. They are highly cost-effective, as reading WeChat content is nearly free compared to traditional paid reading. With distinctive themes and flexible formats, WeChat content better attracts readers. Currently, few journals use Weibo and APP clients, while WeChat official accounts involve lower barriers to entry and relatively small financial investment, making them the preferred choice for journal-new media integration [4,5]. Our survey results align with this, showing that 52.2% of journals have established WeChat official accounts.

The WeChat public platform, built upon WeChat' s massive user base and strong social attributes, has rapidly become an important portal for mobile reading [6]. Journal public platforms enable mobile manuscript review, status checking, and reading, improving editorial and reviewer efficiency. They allow targeted academic paper distribution based on reader interests, facilitate efficient information exchange, expand magazine service connotations, shorten distances with authors and readers, and enhance dissemination efficiency to expand journal influence [7]. Currently, journal WeChat official account operation remains in its early stages with considerable room for exploration, lacking sophistication in column design and information push, with multimedia distribution and WeChat payment only recently initiated. However, progress cannot be achieved overnight. By drawing on mature operational models from outstanding official accounts in other industries and leveraging new media' s advantages in easy dissemination and broad reach, journal official account construction can be continuously optimized.

In summary, the Chinese Preventive Medicine Association journal series has achieved certain progress in digitization and networking, but problems persist. New media integration accelerates journal digitalization and networking, helping

break away from rigid traditional journal formats. Digital publishing, unconstrained by print page limitations, transforms traditional publishing workflows, offering superior capabilities in information organization and production, editorial review and revision, production management, and dissemination channels and forms [1].

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*Note: Figure translations are in progress. See original paper for figures.*

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