Systematic Review on Health Communication in China

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Since the 1970s, health communication (HC) has attracted widespread attention from practitioners and researchers in various fields in China, leading to the production of a vast array of literature.

Keywords: health communication ; CiteSpace ; research hotspots ; development process ; research frontier ; China

1. Introduction

The outbreak of coronavirus disease (COVID-19) prompted the academic community to reconsider HC, and as a result it has become one of the most important research topics worldwide in the past two years. Essentially, HC first arose as a significant issue in the public health field in the United States in the 1970s. More specifically, the Stanford Heart Disease Prevention Program conducted in 1971 was considered to mark the very beginning of HC research worldwide. By the 1980s, research on HC would gradually become a significant concern, spreading from the United States to other countries/regions, including Europe, Asia, Australia, and China ^{[1][2][3][4]}.

At the beginning, a significant body of international scholars such as Thomas ^[5], Thompson et al. ^[6], Wright et al. ^[7], and Schiavo ^[8] explored the concept and connotations of HC. In fact, the concept of HC was formally introduced by Jackson ^[9] for the first time in 1992, while the most widely accepted definition has been proposed by Rogers ^[10] in 1994. Moreover, the majority of HC definitions have stressed that the ultimate goal of HC is to ameliorate the public health index and encourage healthy behavior, with the behavioral change models widely used in HC research mainly including the health belief model, the social cognitive model, and the theory of reasoned action ^[11]. Subsequently, a range of HC studies have been conducted from the perspectives of medicine and public health, social marketing, communication, and pedagogy ^[1] ^[12](13](14]). Clearly, HC is a complex research issue that is deeply connected to a variety of different disciplines. In addition, the analysis of previous studies illustrated that HC research worldwide has focused on several themes, mainly including the doctor–patient relationship ^[12], HIV prevention and control ^[15](16], media interferences ^[13](14], the effect of HC ^[17], the environment of HC ^[18], health promotion, health education and health literacy ^[19](20](21], and special topics (e.g., euthanasia ^[22] and homosexuality ^[23]).

In general, the above-mentioned studies laid a solid foundation for follow-up HC research, especially in providing a reference for China's HC research. On the global scale, China has the world's largest population; therefore, HC research there has become extremely significant, especially during public health emergencies. China's HC research can be traced back to the late 1980s, with health education then regarded as forming the basis for HC research ^[Δ]. Subsequently, the concept of HC in a complete sense was introduced into China via a cooperative public health project between the United Nations Children's Fund and the Chinese Government (1989–1993).

Since then, many research achievements in HC have emerged in China. For example, previous HC reviews mainly focused on certain specific subfields and themes. To illustrate, Hong et al. ^[24] reviewed 28 articles to examine the intervention measures applicable to female sex workers for the prevention of HIV in China. Along different lines, following an analysis of 75 empirical studies published over the previous 15 years, Tang et al. ^[25] found that social media formed the main channel for the public to access and acquire knowledge on homosexuality in China. Furthermore, a review conducted by Hu and Wang ^[26] found, through an analysis of 58 studies, that traditional Chinese sports communication can reap further health benefits for older adults in China. Such reviews can deepen the overall understanding of specific aspects of HC; however, they do not provide readers with an overall understanding of HC research in China. Additionally, according to Hosseini et al. ^[27] and Darko et al. ^[28], qualitative reviews can only analyze a limited number of documents and might result in a potential bias through subjectivity. Therefore, it is necessary to employ the quantitative method in systematically reviewing the wide array of HC literature in China.

2. The Temporal Distribution of Publications on HC Research in China

A total of 1505 published documents were found in the selected databases from 1992 to 2021, with the annual number of publications found to have been increasing over the past 20 years, albeit with certain inverted S-shape fluctuations, as can be seen in **Figure 1**. Furthermore, the lowest outputs appear to have occurred in 1994, 1995, and 1998, which all saw zero publications, while the output reached a peak in 2020 with 232 publications, following nearly three decades of development. The annual average number of papers published was about 75. It is interesting to note that the number of

articles published over the past six years was greater than the cumulative number of articles published between 1992 and 2015. Moreover, it is clear that this is still a young field, as most papers were published in the past decade or so.



Figure 1. The annual number of publications on HC research in China from 1992 to 2021.

Three developmental stages can be identified from **Figure 1** a slow development stage (1992–2004), a steady development stage (2005–2015), and a rapid development stage (2016–2021).

Slow development stage (1992–2004). During this stage, a total of 40 documents were published, which represents an exceedingly small proportion (2.67%) of the total amount. Significantly, no research records appeared in 1994, 1995, and 1998, indicating that no attention was paid to HC research or that research in this subject still remained at the exploratory stage.

Steady development stage (2005–2015). In this stage, the number of publications increased year on year. During this period, a total of 582 articles were published, accounting for about 39% of the total.

Rapid development stage (2016–2021). During the rapid development stage (2016–2021), 883 papers were published, indicating that HC had become a mainstream research topic since 2016. In particular, the peak occurred in 2020 with 232 articles. A reasonable explanation for this is that the COVID-19 crisis stimulated scholars to reconsider HC in China. Meanwhile, the significance of HC was increasingly recognized by the Chinese Government.

Table 1 lists the top 10 journals which paid the greatest attention to HC in China, although it should be noted that these top 10 journals published only 130 out of the 1505 articles, thus accounting for only a small proportion (8.64%) of all selected articles. Furthermore, this topic attracted the most attention from scholars dealing with communications, public health, and sociology. Among these, communication scholars have a core position in the field of HC. Specifically, the *Chinese Journal of Journalism and Communication* ranked in first place with 30 publications, followed by *Modern Communication* (Journal of Communication, University of China) and *Journalism and Communication*. Significantly, the top three journals are the most authoritative journals and have published the highest-quality papers in the field of communication in China. In addition, journals in the medical and public health fields also contributed significantly—for example, *Chinese Medical Ethics* came fifth with 11 articles. In summary, this research topic is multi-disciplinary and attractive to scholars in various research areas in China.

Journal Names	Quantity
Chinese Journal of Journalism and Communication	30
Modern Communication (Journal of Communication University of China)	28
Journalism and Communication	25
Journal of Southwest Minzu University (Humanities and Social Science)	12
Chinese Medical Ethics	11
Chinese Journal of Medical Library and Information Science	10
Acta Editologica	5
Chinese Journal of School Health	3
Chinese Journal of Public Health	3
Journal of Zhejiang University (Humanities and Social Sciences)	3

Table 1. Top 10 journals ranked by the number of publications in the field of HC.

3. Research Hotspots and Research Frontiers in HC Research in China:

Co-Word Analysis

3.1. Research Hotspots and Their Development: Keyword Co-Occurrence Analysis

In order to identify the research hotspots and their evolution over time in the HC field, we conducted a keyword cooccurrence analysis using CiteSpace, thereby generating a keyword co-occurrence network map alongside a time-zone network map of keywords. The maps consist of lines and nodes, with the larger-sized nodes indicating that a particular keyword co-occurred more times with other keywords. The thickness of a line further reflects the intensity of the cooccurrence of two keywords ^[29].

3.1.1. Research Hotspots in the Field of HC in China

In order to identify important research topics in HC research, the study conducted a keyword co-occurrence analysis. The parameters in CiteSpace remained the same, except that the node type was changed from "institution" to "keyword". The keyword co-occurrence network map shown in **Figure 2** consists of 731 institutions (nodes) and 904 connecting lines between nodes. In **Figure 2**, each node represents one keyword; larger nodes reflect a higher co-occurrence frequency, with the links between each two keywords revealing the co-occurrence relationships.



Figure 2. The keyword co-occurrence map for the field of HC from 1992 to 2021 in China. (Note: the authors added English to the map to aid understanding).

In accordance with **Figure 2**, the eleven keywords with the highest frequencies and strongest BCs are presented in **Table 2**. Keywords with a higher centrality are more significant and hold greater importance in the HC research domain. In the current study, only the BC values of HC, health education, and new media exceeded 0.1, illustrating that these three keywords hold key positions and have a connection with other keywords in the network.

Rank	Keyword	Frequency	BC	Year	
1	нс	937	1.25	1992	
2	Health education	105	0.16	1996	
3	New media	93	0.13	2012	
4	Health literacy	47	0.03	2007	
5	WeChat public platform	39	0.03	2016	
6	COVID-19	39	1	2020	
7	АНУМ	38	1	2014	
8	Health information	36	0.07	2003	
9	Social media	28	0.05	2014	
10	Doctor-patient relationship	28	0.04	2009	
11	Public health emergency	26	0.03	2003	

Table 2. Top 10 keywords in the field of HC in China.

Among the top 11 keywords, HC had the highest frequency, ranking in first place because it was a retrieval term in our study. Therefore, this study did not take it into consideration. In addition, social media and the WeChat public platform were considered to be research branches related to new media. The BC value of new media was found to be higher than those of the WeChat public platform and social media, illustrating that new media played a more significant role in HC research. From the three keywords, we extracted social media as a research hotspot. In addition, COVID-19 formed part

of public health emergency. The BC value of public health emergency was found to be higher than that of COVID-19, revealing that public health emergency is more significant in HC research. Therefore, by considering both frequency and BC, we selected public health emergency as the research hotspot. Finally, we identified seven research hotspots as follows: health education, new media, health literacy, health information, AHVM, the doctor–patient relationship and public health emergencies. The following paragraphs will discuss these seven research hotspots in combination with the representative literature in the HC field in China.

Research on Health Education. In China, the primary objective of health education is to educate people in order heighten awareness of health, develop ideal healthy behaviors and lifestyles, and eliminate or reduce risk factors that affect health ^[30]. In particular, HC is seen as one of the most important means of achieving health education. As such, this research hotspot can be divided into two main research directions. One of these is evaluating the effectiveness of health education. In particular, scholars have paid great attention to evaluating the effectiveness of health education concerning acquired immunodeficiency syndrome/human immunodeficiency virus (AIDS/HIV), infectious diseases such as severe acute respiratory syndrome (SARS), Asian lineage avian influenza A virus (H7N9), pulmonary tuberculosis, adolescent mental illness, and diabetes [31][32][33][34][35]. The subjects of these studies have mainly included teenagers, rural women, army officers and soldiers, and children in poverty-stricken, minority areas. For example, Feng [35] demonstrated that centralized teaching can encourage pregnant women to voluntarily accept HIV counseling and testing. Furthermore, to a large extent, education is recognized as an effective measure for altering the public's understanding and behavior regarding their health. The other direction is the role of the communication medium in health education. The channels for accessing health education have been broadened in recent years, and there has been a significant body of discussion on the positive role of the Internet, the WeChat public platform, short videos, online games, and blogs communicating about health education [31](32](33)(36). For instance, Jiang et al. [36] found that for the majority of students, awareness regarding health knowledge and healthy practices had been effectively mobilized through their participation in a health education game named "Health Knowledge Mengmeng Answer".

Research on New Media. Differing from traditional media, new media have changed the way health information is disseminated. This research hotspot has mainly focused on the use of, and changes wrought by, new media in the HC field. Among the types of new media, social media—especially the WeChat public platform—have been considered to be the most popular platforms for disseminating knowledge on health in recent years, especially during the COVID-19 lockdown period in China ^{[327][38]}. Using new media to disseminate health information may lead to a series of issues ^[38]. For example, false health information spreads quickly in the virtual space due to a lack of supervision of the dissemination of health information ^[39]. In order to deal with this problem, scholars suggested strengthening the position of authoritative experts on HC and building HC channels under the supervision of the government, the public, and enterprises in the Internet space ^{[40][41]}.

Research on Health Literacy. In China, the study of health literacy first began in 2005, when an article titled "Progress in Health Literacy Research" ^[42] introduced the concept of health literacy in China for the first time. Following this, scholars began to explore the ways in which health literacy could be evaluated ^{[43][44][45]}. They initially drew on evaluation scales from abroad for measuring levels of health literacy, such as the Rapid Estimate Adult Literacy in Medicine and the Test of Functional Health Literacy in Adults scales, to measure China's health literacy level. Subsequently, in order to develop a health literacy measurement tool in line with the Chinese cultural environment, Xiao ^[46] established a health literacy evaluation indicator system using the Delphi method, including a total of 60 indicators such as personal hygiene, disease prevention and control, and diet/nutrition. These indicators can be used to evaluate four aspects of health literacy: health knowledge, healthy behaviors, health beliefs, and health skills. Furthermore, in recent years, scholars have paid increasing attention to discussing the health literacy of media personalities in the HC process ^[42], the influence of the communication mode on health literacy ^[48], and the significance of new media in improving public health literacy ^[49].

Research on Health Information. This research hotspot focused on research concerning the demand for, and acquisition of, health information and the use of the Internet as a source of health information. Scholars found that social media, such as apps, the Internet, WeChat and TikTok, had become the main channels and avenues by which the public obtained health information in China, which, to a large extent, has led to the majority of patients tending to search for relevant health information on the Internet before visiting a doctor ^{[50][51][52]}. However, the health information published on the Internet may be incomplete, incorrect, and/or misleading, and Bai ^[51] therefore suggested that patients and their families should instead seek advice from experts in professional fields, and authoritative medical institutions should provide medical guidelines through social media and the Internet.

Research on AHVM. The study of HC in the AHVM field is in the early stages of exploration in China. Nevertheless, its significance has been recognized by scholars, governments, and enterprises in recent years. In particular, this research hotspot has focused on the application of HC to the practice of AHVM, and scholars have found that HC can effectively enhance the public and workers' awareness of health management and epidemic prevention and control, decrease the spread of zoonoses, and reduce the risk of contracting foodborne diseases ^{[53][54]}. However, the significance and role of HC in the practice of AHVM was to a large extent ignored, due to a lack of expertise in the communication field, resulting in a situation where health knowledge concerning AHVM was not distributed or disseminated effectively. In order to solve this problem, a series of suggestions were made; for example, Gao ^[55] suggested establishing a professional course on

HC at the related AHVM college, while Hu ^[56] proposed that hospitals and public health organizations should use digital media such as the WeChat public platform, micro-blogs, short videos, and apps for timely reports on the situation in epidemics and other emergencies such as bird flu, to guide public opinion in the correct direction. Excessive reporting and fake information concerning AHVM can produce a significant negative impact ^[57], and therefore it is important to disseminate the relevant information objectively and impartially.

Research on the Doctor–Patient Relationship. The doctor–patient relationship is changing with the decline of doctors' patriarchal role and the rise of patients' autonomous consciousness in China ^[58]. The media play an important role in building and fostering public understanding of the doctor–patient relationship. As such, this research hotspot focused on the doctor–patient relationship as constructed in media reporting. For example, Gao ^[59] analyzed reports on the doctor–patient relationship published in the People's Daily from 1978 to 2018 and found that the status and power over the discourse between doctors and patients were unequal, with doctors being more powerful and having more discursive power. Moreover, positive publicity was still the mainstream view regarding reporting on the doctor–patient relationship, aiming to shape the image of doctors as having good medical ethics, while minimizing the doctor–patient disputes presented in reports ^[60]. However, in recent years, a special situation has arisen in which social media channels such as Sina Weibo have been keen to hype up or exaggerate doctor–patient conflicts in order to pursue economic interests and cater to the particular psychology of their readers ^[61]. Therefore, much attention should be paid to profoundly reconsidering and further studying the responsibilities of the media in reporting news relating to the doctor–patient relationship.

Research on Public Health Emergencies. China's media and academic circles began paying attention to the HC of public health emergencies due to the outbreak of SARS in 2003. At that time, the Chinese Government lacked the capability to respond to such public health emergencies, and the media failed to effectively convey health information related to SARS, resulting in social rumors abounding and thus leading to social chaos ^[62]. Subsequently, scholars studied the relationship between media reports and crises with regard to China's HC practices since the SARS epidemic and put forward some suggestions on how the media should better carry out the practice of HC in the face of public health emergencies ^{[63][64]}. In the last two years, COVID-19 has become an important topic in the HC field in China. Scholars have become committed to research on the communication of information on the risk of COVID-19 in the family ^[66], the role of We Media and the mainstream media in HC during COVID-19 ^[67], and the digital generation gaps and health generation gaps that have appeared during the COVID-19 period ^[68]. A remarkable feature is that the dual role of the government as the authoritative source of information and the main body for HC was emphasized during the COVID-19 period.

2.1.2. The Evolution of Research Hotspots in the Field of HC

The time-zone map of keywords produced by CiteSpace focused on depicting the evolution of research hotspots chronologically in the field of HC. According to the words with the highest frequency, as shown in **Figure 3**, this study divided the development of HC research into four stages. Each stage is discussed in combination with the representative articles and key events at that time.



Figure 3. The time-zone map of HC research in China between 1992 and 2021. (Note: the authors added English to the map to aid understanding).

Stage 1 (1992–1999). The highest-frequency keywords that appeared in this stage mainly included HC, communication studies, health education, and information communication (see **Figure 3**). This stage focused on the study of the basic objectives of HC. The definition of HC was first proposed by Mi G.M. in 1992 and refers to the transmission of credible scientific health information to the public through various communication channels and strategies to promote personal and public health behaviors ^[69]. Furthermore, it was found that HC was used as a measure for social intervention to improve levels of public health, although this concept was not widely accepted by Chinese academics, even though it established a foundation for follow-up research. Subsequently, scholars in the field of public health discussed the concepts of HC ^[70] [⁷¹]^[72] and laid particular emphasis on the value of communication in the fields of medicine and public health. However, few communication scholars participated in the study of HC during this stage. One remarkable characteristic, however, was that the majority of the academic papers on HC research were published in the *Chinese Journal of Health Education*, founded by the China Health Publicity and Education Association.

Stage 2 (2003–2011). **Figure 3** shows the highest-frequency keywords for this period, which mainly included public health emergency, communication knowledge, communication effect, health promotion, health literacy, AIDS, and communication strategy. This indicated that the research themes of HC became more diversified during this period. In addition, the HC on public health emergencies attracted the most attention. One reasonable explanation for this would be the outbreak of SARS in 2003, which led to China experiencing a major public health crisis, bringing about a high level of attention and reflection from the news media, the public, the government, and communication scholars on HC, especially regarding public health, safety, and security. In December of the same year, the "China Health Education and Mass Media Forum" was held in Beijing, making the integration and development of communication and medical and public hygiene a reality for the first time. However, it is worth noting that scholars from the fields of medicine and public health were still the main force driving HC research. In addition, one of the prominent changes was that scholars paid considerable attention to the HC of marginalized groups, e.g., regarding AIDS and homosexuality ^{[73][74]}. For example, Yang et al. ^[63] found that unlicensed prostitutes preferred to learn more about AIDS prevention and treatment from doctors, while drug addicts tended to obtain this knowledge from AIDS prevention and control staff.

Stage 3 (2012–2018). The highest-frequency keywords included new media, mass media, big data, We Media, the WeChat public platform, and All Media (see **Figure 6**). This indicated that scholars were demonstrating interest in the study of digital media use in HC practices. One possible explanation for this could be that communication scholars gradually became the main force driving HC research, focusing on the role and effects of the application of new media in the HC field. Significantly, scholars held a critical perspective on the role of new media in HC practice. On the one hand, they found that new media could promote the audience's ability to actively and easily obtain health information, strengthen their health awareness, and construct an equal dialogue and communication between doctors and patients ^{[75][76]}. On the other hand, they stressed that new media may cause a series of issues to arise, including the transmission of false health information, excessive health marketing, and the homogenization of communication content ^{[41][77]}. Among all the types of new media, great attention was paid to research on the influence of WeChat and apps on audience attitudes and behavior. For example, the forwarding behavior of WeChat users was an important factor in promoting the increase in health information ^[78].

Stage 4 (2019–2021). In this period, the highest-frequency keywords included short videos, health science popularization, COVID-19, and epidemic prevention and control (see **Figure 3**). This indicated that scholars focused on the role and influence of short videos during the COVID-19 period. Furthermore, COVID-19 first broke out in China, which caused a great deal of social panic and worry, mainly due to a lack of detailed and accurate information on the situation surrounding the epidemic. Therefore, timely information disclosure and dissemination are particularly critical in public emergencies. In this context, scholars found that short videos play an important role in information communication, media supervision, positive guidance of public opinion, healthy communication, and mobilization of the public ^{[32][38][76]}. However, it is necessary to clearly recognize the limitations of short videos, as their ability to warn and reflect on emergencies is relatively weak ^[79]; they are not the most important means of crisis communication for public emergencies, but rather a supplement and an aid.

3.2. Research Frontiers in the Field of HC: Burst Keyword Analysis

A research frontier is defined as an emergent and transient grouping of concepts and underlying research issues ^[29]. Kleinberg's ^[80] burst detection algorithm was adapted to identify emergent research frontier concepts using the burst keyword analysis method, referring to the display of keywords which had rapidly changed in a short period of time or dramatically increased in number, emphasizing abrupt changes in keywords ^[81]. A burst contains two dimensions: the burst strength and the bursting time. Keywords with high strength can be identified as research frontiers. By considering keywords with high strength, the research frontiers along the timeline for HC research could be roughly determined. After running CiteSpace, the top 22 keywords with high strength in the field of HC were obtained and are listed in **Figure 4**. From **Figure 4**, it can be observed that all the strength values were above 2, with the highest at 6.04.

	Keywords	Year St	trength Begin	End	1992 - 2021
Communication studies	传播学研究	1992	3.67 1992	2005	Construction of the state
HC	健康传播学	1992	4.11 1993	2009	
Receivers	受传者	1992	3.53 1993	2007	
Interpersonal communication	人际传播	1992	4.06 2000	2011	
Health education	健康教育	1992	4.63 2005	2014	
False HC	伪健康传播	1992	4.14 2005	2012	
AIDS	艾滋病	1992	7.22 2006	2014	
Mass media	大众传媒	1992	4 2006	2009	
Human inflection with highly lethal avian influenza	人感染高致病性禽流感	1992	3.06 2007	2009	
County dwellers	农村居民	1992	3.1 2008	2012	
Content analysis	内容分析	1992	4.26 2010	2013	
Doctor-patient relationship	医患关系	1992	3.66 2012	2018	
Mass media	大众媒体	1992	3.23 2013	2015	
Agenda setting	议程设置	1992	3.23 2013	2015	
AHVM	畜牧兽医	1992	4.02 2014	2018	
WeChat offical account	微信公众号	1992	6.04 2017	2021	
Health behavior	健康行为	1992	2.89 2017	2019	
New media	新媒体	1992	5.68 2018	2019	
Innovation diffusion	创新扩散	1992	2.86 2018	2019	
Health TV programs	健康类电视节目	1992	2.86 2018	2019	
Health China	健康中国	1992	4.68 2019	2021	
Health science popularization	健康私養	1992	3.55 2019	2021	

Figure 4. Top 22 keywords with the strongest citation bursts in HC research between 1992–2021. (Note: red shows the period of the detected term burst, while blue presents the time. The authors added English to the map to aid

understanding).

From 1992 to 2002, the keyword with the highest strength was "HC", which corresponded to that of the first stage in the previous evolution path. During this period, HC was regarded as an emerging discipline, with the majority of the articles on HC being published in the *Chinese Journal of Health Education*. In 1991, the China Institute of Health Education established the Institute of Communication, which specialized in the application of communication to the field of health. As a result, a paper titled "On Health Communication and the Prospect of Health Communication in China" ^[82] was published in *Journalism Research*, a journal in the field of communication, in 2001. Subsequently, a series of monographs were published with HC as a theme, such as "Heath Communication" ^[83] and "Principles and Practice of Health Communication" ^[84]. These academic activities promoted extensive interest in HC studies in the period 1992–2002.

Between 2003 and 2011, the keyword with the highest strength was AIDS, which corresponded to the second stage in the previous evolutionary path. The first case of AIDS in China was discovered in 1985; from then through to the end of the 1990s little attention was paid to AIDS research and practices, as China's government believed that AIDS would not pose a great challenge to the public health system ^[74]. It was not until the early 21st century that the government began to attach importance to the major crises caused by AIDS. Specifically, central government officials visited AIDS patients for the first time in 2003 and demonstrated their firm determination to prevent and cure AIDS. This meant that the relationship between the government, the media, and the public had entered a new stage regarding the AIDS issue. In 2006, the Regulation on the Prevention and Treatment of HIV/AIDS was formulated by the State Council, with Article 29 clearly stipulating that "the news media such as broadcast, television, newspapers and the Internet should carry out public welfare propaganda for AIDS prevention and control" [85]. This meant that the mass media should consciously participate in the prevention and treatment of AIDS and should assume the obligation of popularizing and disseminating knowledge on the prevention and treatment of AIDS, to guide public health behaviors and to eliminate social discrimination against HIV-infected persons and HIV patients. In addition, the mass media was the main avenue by which the public obtained AIDS-related information, and thus the media played a vital role in publicizing national AIDS prevention policies and disseminating AIDS information in China. The positive intervention of the media was highly effective in influencing people regarding AIDS. Therefore, the government and media assistance raised extensive concerns about AIDS between 2003 and 2011.

During the period 2012–2018, the keyword with the highest strength was "WeChat official account", which corresponded to the third stage in the previous evolutionary path. Along with the awakening of the public's health awareness, HC was no longer solely the responsibility and obligation of government departments and the medical and health system. Individuals, social organizations, and enterprises became involved in the subject of HC, drawing support from various new media to disseminate health information. Among these, the WeChat official account was one of the most popular social network tools and received the most widespread attention in China due to its precision, efficiency, personalization, and interactive qualities [86][87]. The WeChat official accounts are app-based accounts established by individuals or businesses on the WeChat public platform. Through these official accounts, individuals or businesses can communicate and interact with specific groups of words, pictures, and voices in an integrated way, since the WeChat platform is an open platform. At present, WeChat official accounts are widely used by health education and public health institutions. Therefore, WeChat official accounts became a research frontier between 2018 and 2021.

After 2019, "Health China" became the keyword with highest strength, which covered the fourth stage in the previous evolutionary path from a macro perspective. In China, the research and practices regarding HC were initiated by the government from the top down. In fact, the government played the dominant role in the development of HC. Health China is a blueprint for the health of the entire population in an integrated, affluent society, an innovative developmental concept that prioritizes health, and a banner under which the common ideals of the government, society and all people can be united ^[BT]. In essence, it is a political discourse. In fact, it became a research frontier mainly because the central government definitively proposed that it was necessary to "put health into all policies, and ensure health for all" at the meeting of the Political Bureau of the CPC Central Committee in 2016, which showed that the establishment of Health China had been officially elevated to a national strategy. Subsequently, two national-level policies, Outline of Health China 2019, respectively, stressing that prevention is the most economical and most effective health management strategy, as well as emphasizing adherence to prevention as a priority and advocating a healthy and civilized way of life in order to prevent and control major diseases. Therefore, the issued policies resulted in "Health China" attracting extensive interest in 2019–2021.

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