

Brief Communication
Medicine General &
Social Medicine



Bibliographical Characteristics of North Korean Medical Journals and Articles

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 OPEN ACCESS

Received: Nov 9, 2017

Accepted: Apr 30, 2018

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ABSTRACT

The aim of our work was to analyze the bibliographical characteristics of 9 North Korean medical journals and articles. All journals show only ten pieces of information, such as publication dates and table of contents, and do not provide submission guidelines and journal policy. Most of the journals were published four times a year. Editorials often share government policy. Research articles are very short and compressed. The journals often publish articles on oriental medicine and medical information useful to the public. In conclusion, the journals were published in their own unique style and format, which are far from the global standard.

Keywords: North Korea; Medical Research; Medical Journals

At the end of World War II, Korea was divided into South and North as a result of political conflicts in the age of the Cold War. The separation of ideologies, language, politics, economy, and healthcare has brought about disparity between the two Koreas. The ideological differences of South and North Korea have had such an impact on the medical field that North Korea founded Juche-Medicine; Juche-Medicine is founded upon “Juche,” usually translated as “self-reliance,” involving an independent health policy and medicine that reflects the philosophical views and ideas unique to North Korea.^{1,2}

However, North Korea's unique medicine was not well known to the outside world in terms of form and content. It is only a glimpse of the reality through the research on North Korean refugees.^{3,4} Fortunately, there is a keyhole to look into North Korean medicine and medical research. By the middle of 2016, nine North Korean medical journals were available in South Korea. In 2018, ten journals are available, and one added is ‘Koryo ūihak.’ However, it is not clear whether there are other North Korean medical journals in addition to the ten journals available in South Korea. Although a few researchers recently studied some North Korean

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Disclosure

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Ha S, Lee YH, Kim SG.
 Data curation: Ha S, Lee YH. Formal analysis: Ha S, Lee YH, Kim SG, Yoon SJ, Chun BC, Kim KJ, Roh SY, Lee EJ, Kim WH. Writing - original draft: Ha S. Writing - review & editing: Ha S, Lee YH, Kim SG.

medical journals to analyze specific medical topics, there have been few studies that analyzed the characteristics of all available North Korean medical journals.⁵⁻⁷

The aim of our work was to analyze the bibliographical characteristics of the North Korean medical journals and articles. We collected nine North Korean medical journals published between 2006 and 2015 through the Ministry of Unification of South Korea's Information Center on North Korea by the end of February 2016 (Table 1). After reviewing the articles, the authors found the characteristics of the medical journals of North Korea and generalized the structure and characteristics of the articles.

There were ten types of information that can be obtained through the cover of the journal: title, table of contents, publisher, printing factory, office address, country of publication, publication date, print date, volume, and International Standard Serial Number. Inside all journals, information such as submission guidelines, types of articles, editorial and peer review process, manuscript format, journal policy and subscription could not be found. All journals were published through the Korea Science and Encyclopedia Publishing House except for 'Ŭihak' (Medical science); the publication frequency were identical at four per year. In terms of content, four of the nine journals deal with general medicine, and five deal with specific areas of medicine such as 'Naekwa' and 'Oekwa.' Most of the journals often publish articles on oriental medicine and medical information useful to the public.

There are generally five types of articles that the journals publish; editorials, research articles, reviews, case studies, and short notes. It is common for the article to have a very short, compressed form, such as a long abstract. The editorials did not function as analyzing current issues, heading opinions nor giving editorial notes; rather, they seem to function as tools of propaganda used to further the political stance and rule that the publication press had. The content of the editorials reflects government policies and the volitions of the Supreme Leader, suggesting the direction that North Korean researchers should take. Some journals' research articles provided English summaries.

Most of articles had identical organizational structures as follows (Fig. 1). First, on average, the bulk of the publications did not exceed two pages, and the use of abstracts was not common. Second, descriptive language was in Korean; use of English was very limited and was mainly used for units of measurement and modifiers. Third, the number of authors in

Table 1. Medical journals of North Korea available in South Korea

Title (English title)	Publisher	Publication start year	Frequency	ISSN	NLM unique ID	Language	Subjects
<i>Naekwa (Internal medicine)</i>	KSEPH	1964	Quarterly	0547-1060	101278406	Korean	Internal medicine
<i>Oekwa (Surgery)</i>		1965		0473-8020	101278407		General surgery
<i>Kich' o ŭihak (Basic medicine)</i>		1969		1728-0338	101215007		Medical science
<i>Chosŏn ŭihak (Korean medicine)</i>		1954		1680-8029	16210070R		Medical science
<i>Yebang ŭihak (Preventive medicine)</i>		1966		1683-9943	101207212		Medical science
<i>Soa, sanbuinkwa (Pediatrics, obstetrics and gynecology)</i>		1978		0583-6697	101281666		Pediatrics, obstetrics, and gynecology
<i>Kugang, ankwa, ibiinhukwa^a (Dentistry, ophthalmology, otorhinolaryngology)</i>		2004 ^a		2219-0694 ^a	-		Oral, ophthalmology, and otorhinolaryngology
<i>Chosŏn yakhak (Korean pharmacy)</i>		1957		1683-9951	101215002		Pharmacy
<i>Ŭihak (Medical science)</i>	CSTIA	1960 ^a	6 times a year	-	101212469		Medical science

ISSN = international standard serial number, NLM = U.S. National Library of Medicine, KSEPH = Korea Science & Encyclopedia Publishing House, CSTIA = Central Information Agency for Science and Technology.

^aUse of the Information Center on North Korea' data when North Korean journals' bibliographical matters cannot be found on U.S. National Library of Medicine.

A sample

Structure

Contents

(인구문론)

뇌출혈발병에 영향을 미치는 기상학적인자에 대한 분석

김종성, 김골

최근 몇 년의 기상현상에서 나타나는 이상과 같이 지적
 되었다.
 <인체공학기술을 발전시키는것은 오늘 발전부분
 영역 내서는 중요한 과업인 것입니다.> (김정일
 신장) 8월, 199페이지)
 위대한 장군님의 말씀을 높이 받들고 우리는 최대
 과학기술력으로 뇌출혈발병에 영향을 미치는 기상인
 자를 찾아내기 위한 연구를 하였다.

연구자료와 방법

관할지역에 발생한 뇌출혈환자(X)와 일
 일 기상요소인 강수량(X₁), 습도(X₂), 체온(X₃), 기압(X₄), 바람속도(X₅), 전운량(X₆), 뇌출
 혈량(X₇), 평균기온(X₈), 평균인도(X₉)를 연구
 자료로 하였다.

Matlab 6.1을 이용하여 뇌출혈발병에 대한 각
 기상인자의 회귀분석도 R을 계산하고 그 결과에 따
 라 뇌출혈발병과 기상인자의 인과를 분석하는 방
 법으로 연구하였다.

연구상징

뇌출혈발병에 대한 각 기상인자의 회귀분석도(R)

회귀분석도			
기상인자 (X _i)	회귀계수 (r _{ij})	기상인자 (X _i)	회귀계수 (r _{ij})
X ₁	0.778	X ₄	0.796
X ₂	0.727	X ₅	0.714
X ₃	0.714	X ₆	0.652
X ₄	0.742	X ₇	0.646
X ₅	0.719		

표제시 6.1을 이용하여 뇌출혈발병에 대한 각
 기상인자의 회귀분석도 R을 계산하고 그 결과에 따
 라 뇌출혈발병과 기상인자의 인과를 분석하는 방
 법으로 연구하였다.

참고문헌

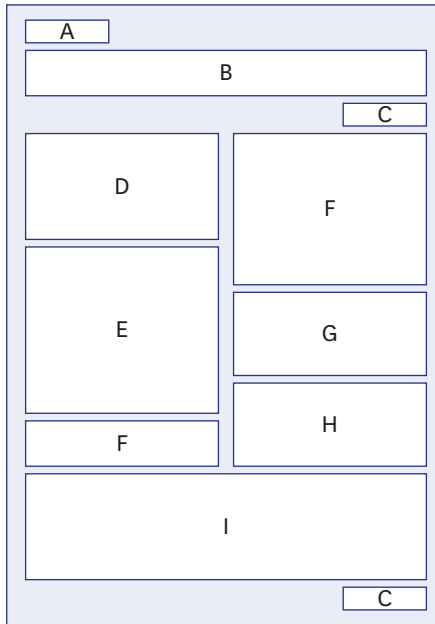
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Summary

**Analysis for the Meteorological Factors Influencing
 Over the Occurrence of Cerebral Hemorrhage**

Kim Chang Song, Kim Gol

We have investigated for the analysis of grey correlation between the factors of meteorological
 phenomena influencing over the occurrence of cerebral hemorrhage.
 It was found that amount of precipitation, in-cloak, air pressure, dampness are the main
 factors affecting the occurrence of cerebral hemorrhage.



- A Type of articles
- B Title
- C Author^a
- D Introduction
- E Materials and Methods
- F Results
- G Conclusion and Discussion
- H References
- I Summary in English^b

Fig. 1. The typical structure of a North Korean medical article.

^aIt is common that the name of author is located after the title. In 'Üihak,' if the author is a professor, an associate professor, or a PhD, the name of author is located after the title. However, other author names are listed after the reference. ^bEnglish abstract is rare.

the article was generally from one to three. Fourth, some of the articles had a brief summary in English at the end. Fifth, tables, graphs, and images were partially illustrated by hand, but even those were rarely seen. Sixth, most articles presented references at the end of the article, but the number of references rarely exceeded six. Furthermore, there was no in-text citation. References included publications mainly from North Korea, Japan, Russia, China, and the United States, but the bibliographical information was written in the language of the publication press. Although some articles of *The New England Journal of Medicine (NEJM)* or *JAMA* were quoted when referring to English articles, none of the cited articles were up-to-date. Lastly, apart from 'Üihak,' there were no keywords provided.

Miscellaneous features are as follows. Articles usually began by citing the Supreme Leaders' instructions, reflecting their ideological views and ideas unique to North Korea. Some statistics such as percent and P values were observed but no specific statistical methods were presented. There were no epidemiological indexes such as mortality and the prevalence of disease. Furthermore, publication bias could be widely observed, as there were no negative cases or results. In addition, the authors could not find any other ethical code including publication ethics regulations.

Since these findings mentioned above are from partial observation of North Korean medicine, they should be interpreted with caution and require further study.

In conclusion, all of the North Korean medical journals were published in their own unique style and format, which are far from the international standard. The purpose of their publications looks for domestic distribution. It is necessary to help their publications keep international standards of editing and publishing.

ACKNOWLEDGMENTS

Special thanks to Prof. Woo Taek Jeon, MD, PhD (Department of Psychiatry and Institute of Behavioral Science in Medicine, Yonsei University College of Medicine), Prof. Hee Young Shin, MD, PhD (Department of Pediatrics, Seoul National University College of Medicine) and Prof. Young Hoon Kim (Department of Healthcare and Medicine for Unified Korea, Korea University College of Medicine) for the inspiration in this research. This work was jointly supported by the Association of Healthcare for Korean Unification and the Department of Healthcare and Medicine for Unified Korea, Korea University College of Medicine.

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