Bibliometric analysis of homeopathy research during the period of 1991 to 2003

WEN-TA CHIU, a YUH-SHAN HO b,c

a Taipei Medical University, Wan-Fang Hospital, Taipei (Taiwan)
b School of Public Health, Taipei Medical University, Taipei (Taiwan)
c Bibliometric Centre, Taipei Medical University, Wan-Fang Hospital, Taipei (Taiwan)

Homeopathy has been applied to clinical use since it was first presented 200 years ago. The use of the bibliometric analysis technique for examining this topic does not exist in the literature. The objective of this study is to conduct a bibliometric analysis of all homeopathy-related publications in Science Citation Index (SCI). A systematic search was performed using the SCI for publications during the period of 1991 to 2003. Selected documents included ‘Homeopathy, Homoeopathy, or Homeopathic’ as a part of the title, abstract, or keywords. Analyzed parameters included authorship, patterns of international collaboration, journal, language, document type, research address, number of times cited, and reprint author’s address. Citation analysis was mainly based on the impact factor as defined by the Journal Citation Reports (JCR) and on citations per publications (CPP), which is used to assess the impact relative to the entire field and is defined as the ratio between the average numbers of citations per publications in a certain period. Of total articles, 49% had a single author. The UK, the US, and Germany produced 71% of the total output, while European countries as a whole also contributed 65% of the total share of independent publications. English remains the dominant language, it comprised only 76%, while German contributed 18%, and the remaining where distributed among 8 European languages. More document types and languages, and fewer pages have appeared in homeopathy research. 3.5% of papers were cited more than 10 times in three years after publication, and 60% were never cited. Small-group collaboration was a popular method as co-authorship. The top 3 ranking countries of publication were the UK, the US, and Germany. The US dominated citation followed by the UK, and then Germany. In addition, a simulation model was applied to describe the relationship between the cumulative number of citations and the paper life.

Introduction

Alternative or complementary medicine is on gaining popularity the world. The basic notions of alternative medicine differ from those of current scientific medicine. Homeopathy, derived from Greek words ‘homeo’ (similar) and ‘pathos’ (suffering), is one of the often-used alternative medical systems in the world. It is based on three principles: like cures like, minimal dose, and single remedy (THE BURTON GOLDBERG
GROUP, 1993). In other words, cures are given according to similar characteristics with minimal dosages of a single substance. It was first described by Samuel Hahnemann (1755–1843) who was a physician, chemist, linguist, historian of medicine, and scientific revolutionary.

Bibliometrics is a type of research method used in library and information sciences. It utilizes quantitative analysis and statistics to describe patterns of publications within a given topic, field, institute, or country. One common way of conducting bibliometric research is to use the Social Science Citation Index (SSCI), the Science Citation Index (SCI), or the Arts and Humanities Citation Index (A&HCI) databases to trace citations. Among medical topics, the SCI and SSCI have been used for a bibliometric analysis of the citations in Ranganathan's publications (LANCASTER et al., 1992), a Spanish investigation of international pharmacy and pharmacology journals (BORDONS et al., 1996), digestive laparoscopic surgery (TUTOSAU et al., 2001), and oncological research overview in the European Union (UGOLINI & MELA, 2003). Alternative medicine has been studied (WAKID, 1997) and some related alternative therapy topics, for instance, acupuncture (ZHANG, 1995), chiropractic (KEATIG et al., 1998), herbal medicine (EVANS, 2001), Qigong (ZHANG et al., 1997), and veterinary medicine (RIVAS et al., 1997) have also been analyzed using bibliometric methods. Evaluating the performance of each research topic is necessary in order to indicate the impact and contribution of authors in their respective fields.

Our purpose was to study the homeopathy research performance based on 977 papers published in Science Citation Index (SCI)-indexed periodicals between 1991 and 2003. These documents were analyzed and evaluated according to publication and citation distribution and were used to determine the quantitative characteristics of homeopathy research.

Materials and methods

The 2002 edition of the Journal Citation Reports (JCR), published by the Institute for Scientific Information (ISI), lists 5876 journals in the Science Citation Index (SCI). Documents used in this study were based on the database of the SCI subscribed from the ISI Web of Science, Philadelphia, PA, USA. ‘Homoeopathy, homeopathic, homeopathy, and homeopathic’ were used as keywords to search titles, abstracts, or keywords. Articles, biographical items, book reviews, corrections, corrections and additions, editorial materials, letters, meeting abstracts, news items, notes, and reviews were obtained from the results of the search for document types. Articles originating from England, Scotland, Northern Ireland, and Wales were grouped under the UK heading. The impact factor (IF) of a journal was determined for each document as reported in the JCR 2002. Collaboration type was determined by the address of each