**Health Information and Libraries Journal: A Bibliometric Analysis**

Bibliometrics is a collective term to denote the techniques of measuring and analysing the scientific research output. It contributes to the progress of science in many different ways [1]: allowing assessing progress made, identifying the most reliable sources of scientific publication, laying the academic foundation for the evaluation of new developments, identifying major scientific actors, developing bibliometric indices to assess academic output, etc. Bibliometrics provides objective criteria to assess the research developed by researchers, being increasingly valued as a tool for measuring scholarly quality and productivity [2]. It is an important approach to assess and analyse the research developed by different actors: countries, universities, research centers, research groups, journals and, in general, scientists [1,3]. In bibliometrics, there are two main methods for exploring a research field: performance analysis and science mapping [4,5].

While performance analysis aims to evaluate the citation impact of the scientific production of different scientific actors, science mapping aims to display the conceptual, social or intellectual structure of scientific research and its evolution and dynamical aspects.

Bibliographic databases are the main source of

information for bibliometric studies. Bibliometric analysis

in biomedical areas can be conducted through databases

specialized in medicine, such as the Spanish medical index

(Índice Médico Español), MEDLINE, or Excerpta Medica,

or through multidisciplinary databases covering all scientific

areas, such as the Science Citation index (SCI).5 The SCI

(http://www.isinet.com/), which belongs to the Institute

for Scientific Information (ISI, owned by Thomson

Scientific & Healthcare, a division of Thomson

Corporation, http://scientific.thomson.com/aboutus/) in

the United States of America, began to publish their reports

in the early 1970s, based on entries dating from 1945.6

ISI covered nearly 5200 journals in 31 different languages

at that time, whereas some 5700 source journals are now

covered by the group’s best known products—the SCI,

the Social Science Citation Index (SSCI), and the Arts &

Humanities Citation Index (A&HCI). These databases are

used to compile the Journal Citation Report (JCR),

published annually in separate editions to include SSCIand

A&HCI-indexed journals as well as those in the SCI

itself. The JCR is where the well-known journal “impact factors” are published.

The Impact factor was introduced in the 1960s by Eugene Garfield, founder and

chairman emeritus of the Institute for Scientific Information (ISI), now a part of

Thompson Scientific, as a measure for the evaluation of scientific journals. Its original

purpose was to help the selection of journals for inclusion in the Science Citation Index

(SCI) (Garfield, 1999). Since 1975 the impact factor has been published annually in Journal

Citation Reports (JCR), also a product of ISI, which is available in two editions: the

Science Edition and the Social Sciences Edition. The ISI, after using the computergenerated

data on the output of journals and on citation frequency ‘‘in-house’’ for the

compilation of SCI for many years, began to publish JCR as part of the SCI and the Social

Science Citation Index (SSCI) (Garfield, 1994). ‘‘Generally speaking, the JCR is a

statistical data set providing information on how often journals are cited, how many items

have been published, and how often, on average, each item is cited’’ (Rousseau, 2002, pp.

421–422).

The main aim of this paper is to carry out a thorough bibliometric analysis of the research conducted by the journal Knowledge-Based Systems (KnoSys) from 1991 to 2014. On the one hand, a performance bibliometric analysis on KnoSys is carried out by showing any data on some important performance indicators, such as, published documents, received citations, impact factor (IF) of journal [6], h-index of journal [7,8], most cited papers [9,3], most cited authors, and data on geographic distribution of publications.

On the other hand, using SciMAT1 [10], a science mapping analysis [11] based on co-word networks is performed in order to discover the most important research themes dealt in the journal and its conceptual evolution across the period of time 1991–2014. This science mapping analysis is based in the approach presented in [12], and it allows us to enrich the analysis with bibliometric performance indicators in order to highlight those themes that have received more attention by the research community. This article is organized as follows: Section 2 introduces the dataset. In Section 3, the performance bibliometric analysis is carried out. In Section 4 the science mapping analysis of KnoSys is presented. Finally, some conclusions are drawn in Section 5.

Health Information and Libraries Journal (HILJ) is the official journal of the Library Association Health Libraries Group (HLG), a subgroup of the Chartered Institute of Library and Information Professionals (CILIP), United Kingdom. The journal was launched in the year 1984 as a quarterly print publication in collaboration with the then Blackwell Scientific

Publications under the title *Health Libraries Review* (HLR) with Shane Godbolt as its founding editor. Currently, the journal is published in electronic-only format and it serves the information requirements of health library professionals across the world. The HILJ discusses a variety of topics relevant to the health knowledge services, and health information and library services workers such as Identifying health information needs, understanding health information behaviour, Information retrieval in health and biomedicine, Information literacy for professionals and the public, management of health information programmes and services, mobilising health knowledge & evidence, information systems design and architecture, health informatics & models of service delivery, education and training of health library and information workers, social care information services, knowledge translation services, research support services, research data management, open data, big data, health and biomedical nomenclatures, vocabularies, terminologies, ontologies and taxonomies and bibliometric/ altimetric studies of a specific health topic, or aspect of impact. In addition to the original research papers, it also publishes short papers addressing various topics relevant to the times.

The journal is indexed in 37 indexing and abstracting databases including the reputed Web of Science, SCOPUS and MEDLINE and its Impact Factor value based on the latest Journal Citation Report (JCR) for the year 2017-18 is 1.19.

The short papaers under the headings**:** Meeting Reports, Letter, Audio‐visual, Patient Information, Famous Names in Medicine, Obituaries, Reviews, Current Literature, Bibliography

**Brief Communications, Patient Information,** Using Research in practice, Learning and Teaching and is positioned at 30 of 61 journals in the ISI Journals Reports ‘Information Science and Library Science’ category as per the Journal Citation Report 2018 with an Impact Factor of 0.008. There has been gradual improvement in *JID*’s impact factor over the years, and between 2006 and 2010 it rose steadily from 4.535 to 6.270 (Figure 1). Its impact factor places the *Journal* first in a list of the top 20 dermatology journals ranked by the Web of Knowledge.

**The 50 most cited *HILR* articles in the Institute for Scientific Information Thomson Reuters Web of**

**Knowledge over the past 25 years and their subcategories**

|  |  |  |  |
| --- | --- | --- | --- |
| **Rank** | **Total times cited** | **Reference** | **Category** |

In addition to the original and review papers pertaining to health science librarianship, the journal publishes a number of interesting columns which continue to evolve and change to reflect the health information and health libraries environment. Currently, the columns features international meetings, book reviews, information technology, media and consumer health.

The objective of the present is to conduct a bibliometric analysis of the *Health Information and Libraries Journal* to find out the most productive authors, highly cited papers, extend of research collaboration and the topics of research discussed in the journal.

The objective of this study is to characterize the scientific production of the RELIME journal, from its creation until 2011, by means of a bibliometric analysis.

Bibliometric case studies on specific scientific journals are quite common in literature. …………. in his quantitative analysis of single journal studies revealed that ….. majority of such studies are conducted in the field …. A number of journals published in the field of health sciences also were subjected to bibliometric analysis. This include …..

Also, there are limited number of studies based on journals in the domain of health librarianship. ……..(2017) analysed the authorship trend of seven scientific, technical, engineering and medical library journals including the *Health Information and Libraries Journal .*

Dimitroff (1991) studied the publication output of the Bulletin of the Medical Library Association (BMLA) for the period 1966 -1990 using content analysis and bibliometric techniques and Gore (2009) replicated the study by analysing the publication output of the BMLA and its succeeding title the Journal of Medical Library Association for the period 1991 – 2007.

**Harande1 (2013)** found that the *Health Information and Libraries Journal is the most productive journal* that published articles on the literature of health information as it appeared in the LISA database.

However, so far no comprehensive bibliometric analysis has been reported on the *Health Information and Libraries Journal .* Murphy(2016) analysed the authorship of articles published in HILJ during 2014-15.

**Materials and Methods**

The major sources of data for any bibliometric study are the Web of Science and SCOPUS databases. For the present study, initially, both these databases were searched for identifying the extent of journal coverage using the following search statements.

**Scopus**:

( SRCTITLE ( health  AND information  AND  libraries  AND journal )  OR  SRCTITLE ( health  AND libraries  AND review ) )

**Web of Science:**

PUBLICATION NAME: (health information and libraries journal) *OR* PUBLICATION NAME: (health libraries review)

The Scopus retrieved 1046 records covering V. 4 (3) 1987 – V.35 (4) 2018 whereas Web of Science retrieved 664 records covering V. 22 (1) 2005 – V.35 (4) 2018. Since coverage is more, the Scopus data covers more journal content, the 1046 records from the database were taken as the base data for the study. The records were downloaded in CSV format. The bibliographic records of the initial years of journal publication

The raw data downloaded from the SCOPUS is saved in CSV format and bibliographic records of research documents published in the journal in the earlier issues, not available in SCOPUS were manually mapped into it.

The data on Impact Factor of the Journal was collected from the Thomson Reuters’ Citation Report database available online.

Articles (806), Review (112), Editorial (70), Short Survey (27), Article in Press (7), Conference Paper (6), Note (5), Erratum (4)

The review and original articles published in the journal in the last 35 volumes of publication, from Volume 1, Issue 1 1987 to Volume 35, Issue 4 2018 constituted the major dataset for the study.

A total of ……. articles published in the journal from March 1984 (Volume 1, Issue 1) to December 2018 (Volume 35, Issue 4) constituted the dataset for the study. The coverage of the journal in both the databases were checked and found that the Web of Science covers the journal from V.17 to V.35 whereas the SCOPUS covers it from volume 4, Issue 3 1987 to V. 35, Issue 4 2018. Hence, the data were retrieved from the SCOPUS database. Of these, 218 documents were under the title *Health Libraries Review* (volume 4, Issue 3 1987 to volume 17, Issue 4, 2000) *and* 817 documents under the title Health Information and Libraries Journal (volume 18, Issue 1 2001 to volume 35, Issue 4, 2018).

Of these, ….. the details of 120 articles published in the first five volumes of the journal during the period 1983-1989 were manually collected from the journal website and the remaining 1009 articles from the SCOPUS database.

The SCOPUS indexed contents of the journal under the title *Health Libraries Review* and Health Information and Libraries Journal . Totally, 1227 documents were retrieved from the SCOPUS which includes 218 documents under the title *Health Libraries Review* (volume 4, Issue 3 1987 to volume 17, Issue 4, 2000) *and* 1009 documents under the title Health Information and Libraries Journal (volume 18, Issue 1 2001 to volume 35, Issue 4, 2018). The 1227 document included 1004 articles, 34 reviews and 12 editorials. The editorial articles were excluded from further analysis. Theinitial issues of the journal, not available in Scopus, i.e. from Volume 1 , Issue 1 1987 to Volume 4, Volume 4, Issue 2, 1987 were collected manually from the journal website.

**Exclusions: Brief Communications, Research, (Conference papers), Patient Information,** Using research in practice, Learning and Teaching

**Avoided: written as articles, but brief communications:2**

**The following pre-processing activities were carried out on the data downloaded in CSV format : Missing author affiliation, changing the document types,**

The dataset available from the SCOPUS were downloaded in CSV format and then the dataset was manually prepared in the SCOPUS CSV file format. Further analyses were carried out using MS Excel, BibExcel and VowsViewer Software tools. The editorial articles of the journal available on the journal website were reviewed for the historical development of the journal. BibExcel was used for extracting the authors without homonyms,

The counts and frequencies readily available on the SCOPUS database were used for the

Citations of the documents available in SCOPUS also used in this study.

All the searches were carried out in the month of December 2018.

The raw data downloaded from the SCOPUS is saved in CSV format and bibliographic records of research documents published in the journal in the earlier issues, not available in SCOPUS were manually mapped into it.

De-duplication of data was carried out

The full text of articles from quarterly issues of the BMLA from January 1991 (volume 79, number 1) to October 2001 (volume 89, number 4) and from its succeeding title, JMLA, from January 2002 (volume 90, number 1) to October 2007 (volume 95, number 4 ) were retrieved from PubMed Central.

Two consecutive periods of times were established to show the conceptual evolution of the KnoSys. The entire time period (1991–2014) was subdivided into periods of more than 1 year. Additionally, although it is common to use periods covering the same time span, the decision was taken to have the first period span eighteen years (1991–2008) because of the low numbers of researchers and publications in the early years. This achieved a first period of a reasonable size when compared with the subsequent period, which was necessary for a good science mapping analysis and to detect the main research themes. Therefore, the data are divided into two consecutive periods of time: 1991–2008, 2009–2014, with 2425 and 4112 keywords, respectively.

The following variables were used:

a) Year of publication. b) Names and surnames of the authors. c) Number of signatures. d) Institutional affiliation of the authors. e) Country where each of the signatory authors works.

The following performance bibliometric indicators are used in our analysis: published documents, received citations, impact factor (IF) of journal [6], h-index of journal [7,8], most cited papers [1,3], most cited authors, and data on geographic distribution of publications.

Bibliometrics-mapping is a new and effective way to use visualization methods, showing meaningful results of raw (or normalized) scientific data. It can be a good technique to assist experts to improve their knowledge in a certain Domain. the VOS (visualization of similarities) map technologies and the free software (free download http://vosviewer.com/) VOSviewer were applied to visualize the ISSST map. There are two (label view, density view) out of four views (label view, density view, cluster density view and scattered view) of VOSviewer which were applied in this research. One map technology was called for giving the position of each terms in the two-dimension map. The other view is density view, used to give an overview of the general structure of the map and shown at the most important research area.

**Results**

**Type and Rate of Publication Output**

The distribution of publications by year is shown in Fig. 1. As we can observe, the number of publications of KnoSys by year has gone increasing. Until 2007 the number of publications is around 50 by year, i.e, the number is low. From 2008 until 2011, that number of publications is increased to twice, i.e, around 100 by year. And, in the last two years, it has almost tripled, i.e., around 300. Therefore, KnoSys is a journal which has attracted an increasing interest in the scientific community.

Fig. 1. Distribution of documents by year (1991–2014). (X=years;Y=50,100,150…)

*In Fig(Total Records:2781;Average:348;Max:549(2004);Min:1998(160))*

The publication output of ISSST is displayed in Fig.2 and Table 1. The annual publications of ISSST papers

revealed that ISSST had published 549 papers in 2004, which was the peak of publication output. Based on the

publications peak, the publication age can be divided into two parts. From 1998-2004, the publications had an enormous increase, while the number of ISSST publications has been gradually decreasing after 2004. These

phenomena may reflect the research activities in the field of safety in China. The cumulative number of papers

consistently increased, and can be described with the linear model y = 208.08x -415743 and R2 = 0.9835, reflecting

the annual growth trend of cumulative papers.

**Authors and Authorship**

The 2044 papers contained 6035 authorship entries, an average of nearly 3 authors per paper. About 3350 authors contributed to the journal; the exact number is not quite certain because of several variants of some names and the possible homonyms. A quite large percentage (70%) of the authors contributed only once; on the other hand, a small group of most productive scientists (1.5% of the authors - see Table 1) were among the authors of 30% of the papers.

An even deeper insight can be gained by considering the evolution of the distribution of the papers by the number of authors. For the sake of lucidity, the overall time span 1974-1999 is divided into five periods (Period 1: 1974-1979, Period 2: 1980-1984, Period 3: 1985-1989, Period 4: 1990-1994, Period 5: 1995-1999). Figure 3 shows that the proportion of one-, two- and even three-authored papers is decreasing, while the proportion of papers with four and more authors is increasing. By Period 4, the modus of the distribution changed from 2 to 3.

Unlike the number of authors per paper, the number of papers per author (i.e., the authors’ publication productivity) does not show any definite tendency. Not only the average productivity fluctuates more or less randomly around the overall mean, but also the underlying productivity distribution exhibits a remarkable stability. A double logarithmic plot of the productivity distribution of authors in the five periods is shown in Fig. 4. The five distributions are very close to each other, and all obey an inverse power law (cf. [4]) with a common exponent of about 2.5.

Lotka (1926) points out that authors with 10 or more publications in a given field should be considered as major producers.

* **Fig. 1. Annual number of papers, authors and authorships**
* **Fig. 2. Number of authors per paper. Annual values (circles) and moving-average trendline**
* **Fig. 3. Distribution of papers by the number of authors**
* **Table: The most productive authors of *Bioelectrochemistry and Bioenergetics* in the five periods**
* The 182 articles have a total of 329 signatures, which means an average of 1.81 signatures per article (co-authorship index), which indicates the scarce collaboration between authors. This index is similar to obtained for other magazines Latin American Mathematics Education: Teaching Science (1.84) and sum (1.74). These indices begin to glimpse a pattern in the Ibero-American co-authorship of the discipline (Maz-Machado et al., 2009). Mexico, which contributes 30.77% of the articles approximately, is only responsible for 26.44% of the signatures. On the other hand, Spain, which is responsible for 24.18% of the firms, contributes only 25.53% of the articles. The countries that most amortize their participation in the production of articles are Greece, the United States and Brazil, doubling (and tripling in some cases) the number of signatures in relation to the number of published articles (Table III).
* Approximately 44% of the articles are signed by only one author, the grade being of collaboration (GC) of 0.5604, which indicates that practically the number of articles written in collaboration and written in isolation is the same, while 4.4% of the articles are signed by four or more authors. The article with the largest number of authors has six signatures. The RELIME GC is very close to the 0.61 found for a set of four Mathematics Education journals in JCR (Jiménez-Fan-jul, Maz-Machado and Bracho-López, 2013).

**International co-authorship patterns**

A commonplace topic nowadays to speak about the globalization, the increasing internationality of scientific research. It is no surprise, therefore, that the proportion of internationally coauthored papers has been constantly growing in Bio-electrochemistry and Bioenergetics, as well (see Fig. 7).

Maybe even more interesting than the mere extent of internationality, is the structure of international cooperations. Figure 8 presents graphically the main coauthorship links between the countries. The position of the countries was attempted to remind their natural

geographical order; two countries were connected if at least three joint papers were published.

The graph shows an interesting “trinodal” character, with the USA, Germany and Russia/USSR being the three nodes. As compared to other similar maps (e.g., [6]), the lack of a stronger European cooperation is particularly striking.

* Percentage share of internationally coauthored papers in total ***Bioelectrochemistry & Bioenergetics*** publications.
* Annual values (circles) and moving-average trendline

**Publication geography**

Countries of origin can be assigned to papers according to the corporate addresses indicated in the byline of the papers or given as a footnote. All addresses of

all contributing authors were considered, and each contributing country was counted exactly once. What counted was, thus, the number of papers to which (any number of) authors from the given country contributed. A total of 64 countries contributed to *Bioelectrochemistry and Bioenergetics. 41* of them are

shown in Fig. 1, where the number of publications is given in the form of a *proportional map,* i.e., a map, where the relative position of the countries is attempted to remind their “natural” (geographical) order, whereas their area represents the number of papers published in *Bioelectrochemistry and Bioenergetics.*

The publication dynamics of the 12 most productive countries. The USA, which appeared to be underrepresented anyway, is still moves downwards; Germany seems to regain its earlier position; Italy, on the contrary, is losing its outstanding. the most dynamic increase is shown by China and Spain (for China the political changes on the turn of the decade, for Spain the EU membership meant a lot).

* **The most productive countries’ percentage share of publications in *Bioelecrrochemistry & Bioenergefics***

We can see in Table II that Mexico, Spain and Argentina are the countries that contribute more than half of the articles, although each of the first two doubles the Argentine production.

In this same table we see that 21% of the countries contribute with a single article.

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**Geographical distribution of ISSST papers**

The papers published at ISSST were published by authors from 30 different countries/territories during 1998-2012. In the list of countries/territories, which have published more than one paper at ISSST (See Table 2), China is ranked as number one having 2,367 papers published or a share of 85.1%. The conference held in China increased the enthusiasm of Chinese scientists to take part in the conference and share the papers in ISSST. Other productive countries/territories are South Korea (28, 1.0%), Taiwan (27, 1.0%), Canada (17, 0.6%) and Japan (14, 0.5%). The analysis of the institutions has shown that all the institutions which have published more than 40 papers were from China. Beijing Cent S Univ (155), China Univ Min &Technol (146) and InstTechnol (134) were top 3 institutions that published more than 100 papers at ISSST during 1998-2012. Other instituions like Chinese Peoples Armed Police Force Acad, Henan Polytech Univ, Univ Sci &Technol China and Beijing Jiaotong Univ (etc…) also performed well in their publications (see Fig.4).

Table 2. Number of publication output in different countries/territories (Records more than one have been listed).

Rank Country Recs Percent (%) TLCS TGCS Rank Country Recs Percent (%) TLCS TGCS

1 Peoples R China 2367 85.1 67 423 12 Netherlands 7 0.3 1 2

2 South Korea 28 1.0 0 8 13 Russia 7 0.3 0 0

3 Taiwan 27 1.0 0 4 14 Belgium 6 0.2 0 2

4 Canada 17 0.6 0 5 15 Germany 5 0.2 0 0

5 Japan 14 0.5 0 0 16 UK 5 0.2 0 0

6 USA 12 0.4 0 1 17 Australia 3 0.1 0 0

7 France 10 0.4 0 2 18 Brazil 2 0.1 0 0

8 Poland 10 0.4 2 4 19 Iran 2 0.1 0 0

9 India 9 0.3 0 0 20 Saudi Arabia 2 0.1 0 0

10 Hungary 8 0.3 4 2 21 Spain 2 0.1 0 0

11 Italy 8 0.3 0 2 22 Switzerland 2 0.1 0 0

Fig. 4. Distribution of institutions of ISSST papers.

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**Institutional Activity**

About one third of the papers published in ***Bio-electrochemistry and Bioenergetics***camefrom a handful of institutions listed in Table 4. It should, however, be noted that the Academies of the former Soviet-bloc countries as well as the French CNRS and the Italian CNR, dominating the top of the list, are, in fact, multi-institutional research networks (even if only a few of their institutes might be active in bio-electrochemical research). Nevertheless, the contribution of several European and US universities is also impressive.

**Table: Institutions with the greatest number of publications in the journal**

|  |  |
| --- | --- |
| Institute (Country) | Percentage share in total papers |
|  |  |

**Citations and Impact factor**

Fig. 2. Distribution of citations by year (1991–2014). (X=years;Y=,200,300…)

The distribution of citations count achieved by those documents is shown in Fig. 2. Until 2004 the pattern of citations received by year is similar to a roller coaster, reaching peaks of 600 citations in the years close to 2004. From 2004, where around 300 citations are reached, the citations received has increased constantly until reaching around 1400 citations in 2012. The significant drop in the citations count of the two last years (2013 and 2014) is caused by the citation time-window. Therefore, we could predict that the citations will continue improving in the next years.

The impact factor of the KnoSys published by Thomson Reuters in its bibliographic database, the Science Journal Citation Reports, from 1997 to 2013 is shown in Fig. 3. We also include information on the position (quartile) inside the ISI category ‘‘Computer Science–Artificial Intelligence’’. The evolution of the impact factor of the KnoSys has been very positive, ranking it in the top positions of the ISI category in the last years, i.e., in the quartile Q1.

Fig. 3. Impact factor by year (1997–2013).

**Journal impact factor**

Impact factors are calculated each year by Thompson Reuters (New York City, NY) from the number of citations to recently published articles in a journal and are used as a measure of relative stature compared to similar journals [4,5]. A comparison of five forensic journals over the past five years shows the yearly improvement of FSI Genetics (Fig. 1). The 2012 impact factors, which were released in June 2013, ranked FSI Genetics #1 out of 16. 16 journals in the ‘‘Medical, Legal’’ category with an impact factor of 3.861. The relative journal ranking for FSI Genetics in the legal medicine category is indicated next to each year.

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**Topics Covered**

The most frequently used relevant tide words in the five periods

|  |  |  |  |
| --- | --- | --- | --- |
| Period 1 (1974-1979) | |  |  |
| **Title word** | **No. of Papers** |
|  | |  |  |
|  | |  |  |

**Analysis of references**

In this period 1617 papers contained 39103 references (an average of about 24 references/paper) to about 28000 items. The distribution of papers by the number of references is given in Fig. 12. The stability of the distribution from the 80’s (Periods 2+3) to the 90’s (Periods 4+5) is remarkable. Authors most cited in the reference lists of Bioelectrochemistry and Bioenergetics are listed in Table 6 (only first authors were considered in this case). Authors marked with an asterisk (\*) were also authors in Bioelectrochemistry and Bioenergetics itself; those marked with a double asterisk (\*\*) were in the most productive authors’ list (Table 1).

**Authors Most Cited**

|  |  |
| --- | --- |
| Author | Number of references |
|  |  |

About 85% of the cited items were journal articles. The list of journals most cited in *Bio-electrochemistry and Bioenergetics* is given in Table 6. The stabilization of the journal itself at the first position with a healthy self-reference rate of about 8% should be seen as a sign of maturity. The slipping back of *J. Am. Chem. Sot.* parallels the losing ground of thematic category C (electrochemical reactions, catalysis, etc.).

Journals most cited in ***Bioelectrochemistty and Bioenergetics***

|  |  |  |  |
| --- | --- | --- | --- |
| Journal title | Times cited in ***B&B*** | Period |  |

Most cited references in ***Bioelectrochemistry and Bioenergetics***

|  |  |
| --- | --- |
| Reference | Times cited in ***B&B*** |

A reference item worth of particular attention is Lowry’s J. *Biol Chem.* article, which is the highest cited scientific article of all times: in 1998, 47 years after its publication it still received a total of more than 5000 citations!

The age distribution of the references is shown in Fig. 13. Again, the 80’s (Periods 2+3) and the 90’s (Periods 4 +5) are presented separately. The maximum (modus) of both distributions is at 2 years, the median (“reference half-life”) changed from 6 to 7. This latter value indicates that *Bioelectrochemistry and Bioenergetics* papers largely rely upon more “mature” literature, but the value is far not unusual in this field. Another indicator characteristic to the age of the references is the *Price-index:* the percentage share of references not older than five years. The Price-index of *Bioelectrochemistry and Bioenergetics* changed from 45% to 41% during the period under study – certainly far from the 80% of the hottest particle physics or molecular biology journals, but fitting well into its own subject field.

Some of the references are worth attention just because of their extreme age. References to papers more than a century old at the time of citation are collected in Table 9 in the order of their age.

Century old references found in ***Bioelectrochemistry and Bioenergetics***

|  |  |  |  |
| --- | --- | --- | --- |
| **Author** | **Title** | **Year** | **Journal** |

**Analysis of citations received**

During the years 1975 **1998,** 1522 *Bioelectrochemistry and Bioenergetics* papers (out of the total 2044) received 13512 citations from 8314 citing papers (including 1023 papers from *Bioelectrochemistry and Bioenergetics* itself). Taking into account that according to certain estimates [7] 25% of the scientific literature would never be cited, and that about 213 of the uncited *Bioelectrochemistry and Bioenergetics* papers were published after 1995, having thus good chances to get still cited, the overall visibility of the journal is definitely above average.

Journals citing ***Bioelectrochemistry and Bioenergetics***

|  |  |  |
| --- | --- | --- |
| Journal | No. of citing items | No. of citations |
|  |  |  |

*Bioelectrochemistry and Bioenergetics* papers were cited in the 1975-1998 period in more than 1000 journals. Almost half of the citing items (and 56% of the citations) were concentrated in 25 journals (see Table 10).

**Science Mapping**

The collaboration in the period studied for the RELIME journal is reflected in a clearer way when carrying out and visualizing in graphic form the network of collaboration between authors (Figure 2). The size of the node represents the number of articles of each author. From Figure 2 we highlight that there are more important network components in terms of volume of production and number of members, although there are many small components (n <4) and even isolated authors (not shown in the figure) . The main components of the network are of starry type, with one or two authors who lead and constitute the link between the authors. Conducting a series of reductions, we are left with the main components of the co-authorship network in which at least 4 authors intervene (Figures 3 and 4, next page). The thickness and color of the line corresponds to the number of collaborations between the authors.

*3.2. Topic analysis of ISSST*

Publications of ISSST terms which were used in the title and abstract can refelct the main topics of scientific research. The knowledge mapping sofeware VOSviewer, which uses processing techniques yields a list of all noun phrases from title and abstract. In this part, two aspect of the topic map of ISSST were mapped. First, the overall terms acquired from 2,781 pubilications are displayed in Fig.5 and Fig.6. In these two maps, minimum 10 terms were selected as the minimal number of occurrence and 38,697 terms have been extracted from the title and abstract area, 865 terms had met the threshold and have being mapped. For each of the 865 terms, a relevance score was calculated, and on the base of this score, the most relevant terms were selected. At last, a totall of 519 terms were selected and mapped. In order to show the clear cluster, the value of 0.8 was selected as clustering resolution. The terms were in the next step divided in three clusters (terms with the same colour were in the same cluster). Cluster 1 (red) was named as “safety and accident management” (including in total 236 terms), where was paidcmore attention to use of management methods for accident control and analysis. Cluster 2 (green) was named asc“Fire safety research” (including in total 144 terms). In this cluster, terms are mostly related to the fire research.c“Coal mine safety research” is the name of Cluster 3 (Blue, including in total 139 terms). Term “numericalc simulation” reflects the basic method that was used in this cluster. For more detailed information of the terms pleasecrefer to Table 3.

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A term map was created based on a corpus of scientific publications in the field of library and information science (LIS). The corpus was extracted from the Web of Science database and consists of the titles and abstracts of about 10,000 publications that appeared in the period 1999–2008 (for more details, see Waltman et al., 2010). Out of the 2101 noun phrases that occur in at least 15 publications in the corpus, the term map contains the 1000 noun phrases that are considered most relevant

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text mining functionality of VOSviewer is used to get some insight into the citation impact of the different topics covered by a journal. The journal that we consider is the Journal of the American Society for Information Science and Technology (JASIST). The analysis uses data from the Scopus database. Using the text mining functionality of VOSviewer, a term map was created based on the titles and abstracts of all publications that appeared in JASIST in the period 2005–2009. The term map contains 468 terms and is shown in Figure 4. The color of a term indicates the average citation impact of the publications in which the term occurs. Colors range from blue (lowest citation impact) to red (highest citation impact). Interestingly, there turn out to be large differences in citation impact among the various topics covered by JASIST. The term map indicates a strong separation between bibliometric/scientometric topics on the one hand and information science/information retrieval topics on the other hand. On average, publications on bibliometric/scientometric topics turn out to receive many more citations than publications on information science/information retrieval topics.

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If we make an analogy between the authors and the countries of the authors we could say that Mexico, Spain, Argentina and Italy are large producers (n • 10) in terms of Lotka.

The strongest links or collaboration links are Mexico with Spain and Mexico with Argentina. We observed a component of the crossover type collaboration network and some isolated nodes. There are two central nodes of this component, namely Mexico and Spain, which act as the main links of this component, although Mexico is the most important producer.

**Concluding remarks**

*JID* has been a powerful contributor to the growth of the scientific base of cutaneous biology and dermatology over the past 25 years. Developing bibliometric systems document clearly the *Journal*’s increasing impact on the field and its recognition as an excellent resource by high-quality publications across many other disciplines in the biomedical sciences. Although several factors can be invoked to explain these impressive accomplishments, the role of the outstanding editors of the *Journal* is perhaps the most important of all (Supplementary Table S6 online). *JID* has benefited from the remarkable contributions of these leaders and is positioned well to build on these successes over the next 25 years.

**5. Conclusions**

the near absence of Latin American authors in the initial years of the journal's publication is striking.1 The early volumes comprise a diverse collection of Spanish-language translations, primarily of texts originally written in German.

In this paper, a bibliometric analysis of KnoSys has been developed. Some important findings are the followings:

The journal has attracted the interest of the scientific community throughout years, which is observed in the great growth of publications, citations and submissions received.

\_ The impact factor of KnoSys has increased until to consolidate

the journal in the first quartile in the ISI category ‘‘Computer

Science–Artificial Intelligence’’ in the last editions of Journal

Citation Reports.

\_ The h-index of KnoSys is 40, therefore according to the concept

of H-Classics [9], we can identify 40 most cited papers in Kno-

Sys. The authors Drs. Xu, Herrera-Viedma and Wei contributed

with more than one most cited papers, and also, those documents

where published in recent years. Moreover, we should

point out that Peoples Republic of China is the country with

more highly cited documents, publishing an amount of 14 most

cited papers.

\_ We have identified the authors that have played a prominent

role in the development of KnoSys. Some of them are: Drs.

Andrew, Coonen, Diederich, Fujita, Tickle and Xu

During 1991–2008, United Kingdom, USA and Peoples Republic

of China are the countries most productive. But, during 2009–

2014 these positions changed, being Peoples Republic of China

and Spain on the top, as most productive. Also, Taiwan

increased its number of published documents.

\_ In the whole period, Peoples Republic of China is undoubtedly

the most productive country, doubling the publications of the

second one.

\_ The publications of KnoSys is focused on eight great thematic

areas: Classification, Data-mining, Rough-sets, Decisionsupport-

systems, Agent-systems, Information-retrieval, Groupdecision-

making and Semantic-web.

\_ We have identified two emergent themes that could attract the

interest of the scientific community in the future: Ontology and

Social networks. Both important topics related with the

development of the Web and the problem of Big Data.

We are now receiving contributions from many professionals who work outside libraries and our scope is truly international with an increasing proportion of submissions coming from countries other than the United Kingdom.

Since its launch in 1984, *Health Libraries Review* (HLR), the official Journal of the Library Association Health Libraries Group, has matured into an important information source for information professionals working in the health and community care fields, both inside and outside Europe.

The Journal itself grew out of the Group's *Newsletter* which started publication in 1978. Under the

Editorship of myself and Paul Valentine, and with active and enthusiastic support from

other staff at Charing Cross Hospital Medical School Library, the *Newsletter* grew from

36 pages in 1978 to over 400 in 1983. After much fact finding and discussion it was decided that the publication should be split into a *Newsletter* which would be smaller and would be mailed to all Group members, and an official Journal on a subscription basis.

Negotiations were entered into with four publishers. The most attractive package was

offered by Blackwell Scientific Publications who already published journals for a large

number oflearned societies and professional associations. I was appointed, by the Group

Over the years *HLR* has addressed a broad range of technological, socioeconomic and

current practice issues. It has developed a number of columns of particular interest to

members-national and international meetings, book reviews, information technology,

media and consumer health.

It will appear in the 2007 Journal Citation Reports (released in 2008) with an IF.

decision taken last year(2007) to make HILJ only available electronically.

HILJ is now one of the top 5 library and information journals across the world.

Graham Walton-Editor

Shane Godbolt- First Editor

CILIP, the Chartered Institute of Library and Infor-

mation Professionals, is the UK’s professional

body for library and information professionals and

includes the Health Libraries Group (HLG) as one

of its subgroups. HLG has two regular publi-

cations: the

Health Information and Libraries

Journal

(

HILJ

) and the

HLG Newsletter

HILJ

and the

HLG Newsletter

have very differ-

ent roles for health library and information sector.

With an impact factor of 0.939 and rising,

HILJ

might be considered the academic arm of the HLG

library of publications, positioned as 30 of 61

journals in the ISI Journals Reports ‘Information

Science and Library Science’ category

Co-owned by the HLG and Wiley-Blackwell,

HILJ

is based

on the subscription model of publishing and seeks

to publish original articles on current practice, pro-

jects or research, reviews or state-of-the-art papers

studies underway and the development of new

resources or services.

Maria J Grant -Editor

the first issue of

HLR

was published in March 1984, with Shane as

the Founding Editor.

The journal has travelled a long and, at times,

rocky road from that point to become the successful

and respected publication it is now. This included

a change of title in 2000 to the

Health Information

and Libraries Journal

(

HILJ

)

In the past 25 years the changes in publishing

have been extraordinary, and hand in hand with this

have come enormous changes in the library world.

Indeed, the development of

HILJ

is particularly

fascinating in that it reflects and charts the

progress of these partner industries.

In 1984 the

company was a relatively small Oxford-based

academic publisher called Blackwell Scientific Publications. In 1993, as the company grew it

became Blackwell Science. Then, in 2001, it merged

with sister company Blackwell Publishers to form

Blackwell Publishing and the following year moved

to newly-built headquarters in Oxford Business

Park. Most recently, the company merged with the

Science, Technical and Medical (STM) arm of John

Wiley & Sons to form one of the largest academic

publishers in the world, Wiley-Blackwell.

From 1997 onwards every

issue of every journal published in print has also

been published online on our online journals

platform, Blackwell

Synergy

(in July 2008 the

content was moved to Wiley

Interscience

). Indeed,

for

HILJ

, every issue ever published right back

to 1984 is available online, with all but the most

recent 3 years of issues being freely available to

all

Since its launch in 1984,

Health Libraries Review

(

HLR

), the official Journal of the Library

Association Health Libraries Group, has matured into an important information source

for information professionals working in the health and community care fields, both

inside and outside Europe

Judy Palmer-Editor (2nd?) (1999–2002)

Graham Walton, editor 2003–2009

Major Achievements were: accept-

ance for inclusion in the Science Citation Index

in 2006 leading to the first Impact Factor in

2008;

professional

body for library and information professionals and

includes the Health Libraries Group (HLG) as one

of its subgroups

Blackwell Scientific Publications, regarding the possibility of a professional journal for medical, health and welfare librarians. These events have clearly demonstrated the value to us all of being able to share ideas and experience across national boundaries. From this year some new features are being introduced in the journal with the aim of building and developing it to meet the needs of its readership.

June last year saw the inception of a column on IT and this will become a regular feature.

**References**

**Bibliometric analysis of the scientific production of the** Revista Espa˜nola de Cirugía Oraly Maxilofacial **duringtheperiod2005-2011 .** rev espciroralmaxilofac. 2014;**36(4)**:156–163//***Bárbara Monteserína***,∗***, Luis Manuel Junquera, José Antonio Cordón y Santiago Llorente***

Murphy, J. (2016). Global publication trends in the Health Information and Libraries Journal, 2014–2015. *Health Information and Libraries Journal*, 33, pp. 82–83.

Bonnett, P*.* Analysis of throughput over 25 years. *Health Information and Libraries Journal*, 25 (Suppl. 1), pp.10– 13.

Model Abstract

*Objectives:* The aim of this work is to perform a quantitative analysis of the scientific production appearing in the Revista Espa˜nola de Cirugía Oraly Maxilofacial (RECOM) between the years 2005 and 2011,followed by a literature review of the se contents. *Material and method:* A descriptive and longitudinal study was conducted on the articles published in the RECOM Journal between January 2005 and December 2011.Theinvestigated variableswere:documentaltypeswithscientificcharacter,topics,andlanguageinwhich it waspublished,source,institutionalaffiliationsandmultipleauthorship,meantime betweenthesubmissionofthepaper,andthenumberoftimesthatarticleshavebeen mentioned byRECOMitself. *Results:* A totalof200scientificarticleswerepublishedinRECOMduringtheperiodstudied, mostlyclinicalcasesaboutoralsurgeryoroncologywritteninSpanish.Madridhospitals produced28%ofthearticlesinthisjournal,andthenumberofinternationalpaperswas low(23%fromSouthAmerica,andonly2%European).Themeanwaitingtimebetweensub- mitting thedocumentationanditsacceptancewas296days.Thereferenceindexreceived for articlespublishedintheRECOMwas4%. *Conclusion:* TherewassignificantinRECOMduringtheperiodstudied,improvementsthat mustcontinueinordertogainrecognition.