



## A SCIENTOMETRIC ANALYSIS OF “CANADIAN JOURNAL OF INFORMATION AND LIBRARY SCIENCE (2007-2016)”

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### **Abstract:**

The present study deals a scientometric analysis of 148 papers published in “Canadian Journal of Information and Library Science” during the period 2007 to 2016. Data was collected using the journal website and analyzed using Microsoft Excel and SPSS. The study focuses on various aspect of the journal such as, year wise growth of papers, authorship pattern, institutions involved, and length of pages and average of citations. The study shows that Department of Medical Entomology and Parasitology, School of Medical Sciences, Tarbiat Modares University, Tehran, Iran topped in the institution list.

**Keywords:** Scientometrics, Distribution of Contributions, Canadian Journal of Information and Library Science, authorship pattern.

### **1. INTRODUCTION:**

The Aim of Scientometrics is to provide quantitative characterization of scientific activity of journals in research trend; Scientometrics is a branch of library and information sciences, it provides the particular importance information of publication in scientific communities (Fawaz, Khaperde, and Wankhede, 2014). It is largely simultaneity with Bibliometrics, which focus on quantitative analysis of any written form. It is complex of quantitative mathematical and statistical methods using to investigating such type of aspects of research, which has to define evolutionary and view of science (Bonitz, 1999). In other sense scientometrics is a discipline of measurement; Scientometrics has strong connected with the information and library of science as well as science policy. In 1970 we saw the development of Scientometrics as on operational action which is applying Bibliometrics method and technique to their own field, it is confirm that Scientometrics have own domain, standing evolved as heterogeneous field in topics and practices. The research has been done on Scientometrics analysis of Journal of arthropod – Borne Disease”. (2010-2014): on DOAJ to finding the emerging Trans and discipline.

### **2. REVIEW OF LITERATURE:**

There have been few scientometrics studies conducted on individual journals. Some of the relevant studies in the aforementioned for direction are creditable of review. In his study they showed that distribution of contribution, authorship pattern & author productivity, institution-wise distribution, geographical distribution of contribution, document type-wise distribution, and average length of paper, mail domain wise distribution and number of references in each year. A bibliometric analysis of 34 articles published in of the Nanotechnology has been done by Jogdande and et.al, (2019) during the period of 2014-2018. In his study they focused on various aspects: such as document types, of publications and citations, year-wise, authorship pattern, institutions involved, most prolific authors of the journal. Distribution of article by year, authorship patterns, distribution of contributions by institution, and geographical distributions of authors etc.



### 3. OBJECTIVES OF THE STUDY

The main objectives of the present study are:

- To examine the distribution of the contrition year wise.
- To find out authorship pattern of contributions.
- To find out the contribution Institution wise.
- To find out the Geographical distribution of contributors of articles.
- To find out the average citation per contribution in each year.
- To find out the average pages per Year & per contribution.

### 4. ABOUT THE CANADIAN JOURNAL OF INFORMATION AND LIBRARY SCIENCE

Canadian journal of information and Library science is international journal, journal started from 1976 for published up-to-date research in the field of Library and information science. The journal dedicated to the publication of research output in the both of full-length and brief format. The journal covers the topic of in authoritative bilingual contributions in respected field (Canadian journal of information and Library science, 2021).

### 5. SCOPE AND LIMITATION

The data presented in this paper have been accessed from journal website. The basic data collected during the year 2007-2016. These study is limited 10 year published article in Canadian Journal of Information and Library Science during the year 2007-2016 All the searched results were saved in text files and then imported into Micro Soft-Excel and SPSS to organize, analyze and generate the tables, graphs and charts for final study.

### 6. DATA ANALYSIS AND INTERPRETATION

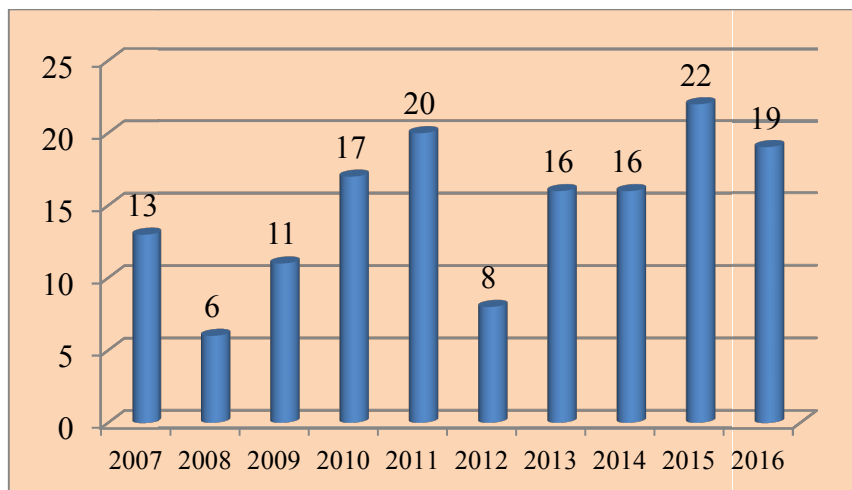
In views of the objectives of the present study, analysis of “Canadian Journal of Information and Library Science” is presented in table and figure format.

#### 6.1. DISTRIBUTION OF CONTRIBUTIONS (YEAR WISE)

The word publication means the act of publishing .Productivity refers to measures of output from production processes, per unit of input.

**Table No.6.1 - Year Wise Distribution of Articles**

Year	Vol.	Issues	Articles	%age	Cumulative of Articles
2007	31	3	13	8.78	13
2008	32	2	6	4.05	19
2009	33	2	11	7.43	30
2010	34	4	17	11.49	47
2011	35	4	20	13.51	67
2012	36	2	8	5.41	75
2013	37	4	16	10.81	91
2014	38	4	16	10.81	107
2015	39	3	22	14.86	129
2016	40	4	19	12.84	148
<b>Total</b>		<b>32</b>	<b>148</b>	<b>100</b>	<b>148</b>
<b>Average article per issue</b>			<b>4.62</b>		



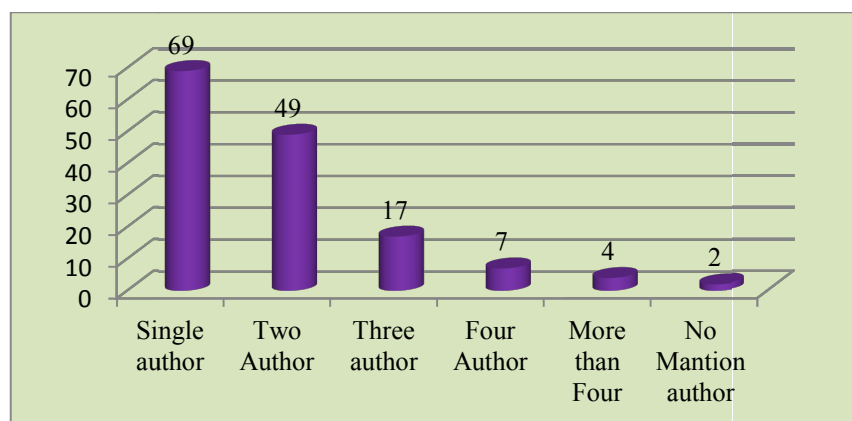
**Figure No. 6.1 Year Wise Distribution of Articles**

Table No.6.1 and figure No. 6.1 shows the Year Wise Distribution of Articles, out of the total 148 articles it shows that the majority of the articles i.e. 22 articles were published in 2016, and minimum articles i.e. 6 articles published in 2008.

## 6.2 AUTHORSHIP PATTERN OF ARTICLES

**Table No.6.2 - Authorship pattern of articles.**

Year	Single Author	Two Author	Three Author	Four Author	More Than Four	Not Mention Author	Total
2007	8	4	1	0	0	0	13
2008	4	1	0	1	0	0	6
2009	6	4	0	0	1	0	11
2010	10	3	2	2	0	0	17
2011	7	8	3	1	1	0	20
2012	7	1	0	0	0	0	8
2013	6	6	3	0	1	0	16
2014	3	10	2	1	0	0	16
2015	11	6	4	1	0	0	22
2016	7	6	2	1	1	2	19
Total	69	49	17	7	4	2	148



**Figure No. 6.2 Authorship pattern of contributions**



Table no. 6. 2 shows the authorship patterns of the articles published during the period of study. Of the 148 articles, the largest number of articles had been published by single authors 69 (46.62%). This is followed by two authors 49 (33.11%), followed by three authors 17 (11.49%), four Authors 7 (4.73) respectively.

### 6.3 MOST PRODUCTIVE AUTHORS:

An author is defined as the person who originates or gives existence to anything and sets forth written statements (Fowler, 1988).

**Table No. 6.3 - Most Productive Author**

Sr. No.	Name of Author	Frequency	Percentage
1	Beheshti, J.	4	1.50
2	Hicks, D.	3	1.13
3	Large, A.	3	1.13
4	Zhang, J.	3	1.13
5	Burkell, J.	2	0.75
6	Chen, H.L.	2	0.75
7	Dufour, C.	2	0.75
8	Howard, V.	2	0.75
9	Julien, H.	2	0.75
10	Kamal, A.M.	2	0.75
11	Larkin-Lieffers, P.A.	2	0.75
12	ManĀ ev, M.D.	2	0.75
13	Michels, D.H.	2	0.75
14	Montiel-Overall, P.	2	0.75
15	MĀ©nard, E.	2	0.75
16	MĀagnigbĀto, E.	2	0.75
17	Nilsen, K.	2	0.75
18	Nwagwu, W.E.	2	0.75
19	Rousseau, R.	2	0.75
20	Tabatabaei, N.	2	0.75
21	Ye, F.Y.	2	0.75
22	One Author Cited (1X217)	217	81.58
23	Not Available	2	0.75
<b>Total</b>		<b>266</b>	<b>100.00</b>

It can be observed from Table No.6.3 that, the most productive authors are Beheshti, J. who had contributed 4 (1.50%) papers, followed by Hicks, D., Large, A. and Zhang, J. had contributed 3(1.13%) papers, respectively.

### 6.4 DEGREE OF COLLABORATION

Degree of collaboration in the international journal of “Journal of arthropod – Borne Disease” the formula given by K. Subramanyam is useful for determining the collaboration in quantitative terms. The study followed the same formula which is mention in mathematically put as;



$$C = \frac{NM}{NM + NS}$$

Where,

C= Degree of collaboration

NM= Number of multi authored papers

NS= Number of single authored papers

In the present study

NM=77

NS= 69

$$C = \frac{77}{77+69} = \frac{77}{148} = 0.52$$

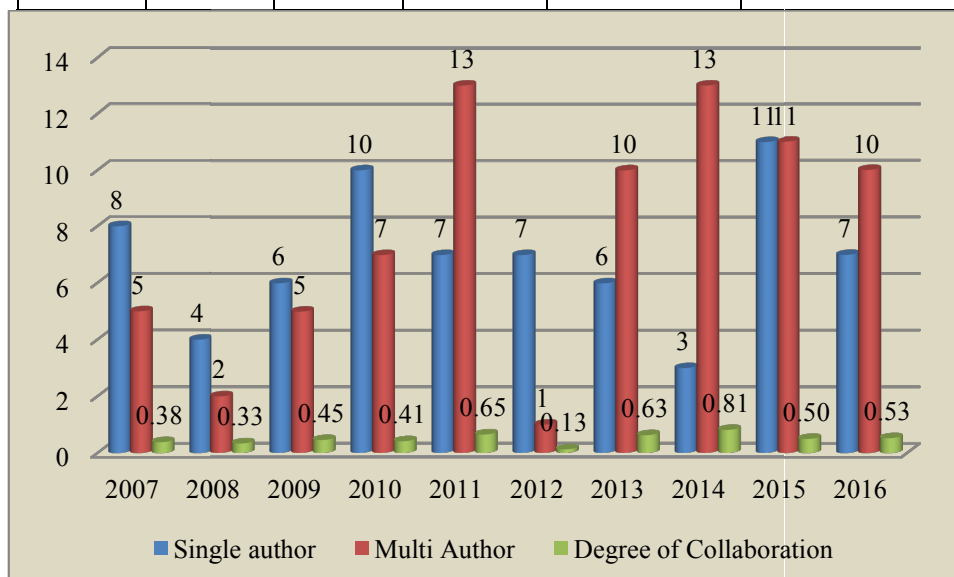
Those, C= 0.52

Thus the degree of collaboration of “Journal of arthropod – Borne Disease” is 0.52 which clearly indicates its dominance upon individual contribution.

#### 6.4.1 AUTHORSHIP PATTERN AND DEGREE OF COLLABORATION

**Table No. 6.4.1 - Authorship Pattern and Degree of Collaboration**

Year	Single Author	Multi Author	Not Mention	Total No. of Articles	Degree of Collaboration
2007	8	5	0	13	0.38
2008	4	2	0	6	0.33
2009	6	5	0	11	0.45
2010	10	7	0	17	0.41
2011	7	13	0	20	0.65
2012	7	1	0	8	0.13
2013	6	10	0	16	0.63
2014	3	13	0	16	0.81
2015	11	11	0	22	0.50
2016	7	10	2	19	0.53
<b>Total</b>	<b>69</b>	<b>77</b>	<b>2</b>	<b>148</b>	<b>0.52</b>



**Figure No. 6.4.1 Authorship Pattern and Degree of Collaboration**



Table No. 6.4.1 shows that in the 10 years period, the Multi authored articles are higher and predominant than single author. The single authored articles are highest in the year 2015 and cumulative degree of collaboration is 0.52.

## 6.5 INSTITUTES WISE DISTRIBUTION OF ARTICLES

**Table No.6.5 - Institution Wise Distribution**

Sr. No	Institution	Frequency	Rank
1	Western University	19	1
2	McGill University	11	2
3	Universite de Montreal	7	3
4	University of Alberta	7	3
5	The University of British Columbia	6	4
6	University of Wisconsin Milwaukee	6	4
7	Dalhousie University	5	5
8	Universiteit Antwerpen	3	6
9	University of Toronto	3	6
10	University of Missouri System	3	6
11	Florida State University	2	7
12	CNRS Centre National de la Recherche Scientifique	2	7
13	University of Arizona	2	7
14	Conservatoire National des Arts et Metiers	2	7
15	Long Island University	2	7
16	University of Guelph	2	7
17	Nankai University	2	7
18	Indiana University-Purdue University Indianapolis	2	7
19	KU Leuven	2	7
20	University of Ottawa, Canada	2	7
21	Nanjing University	2	7
22	Universite de Toulouse	2	7
23	Groupement d'Etudes et de Recherche Interdisciplinaire en Information et Communication	2	7
24	One Time Cited (1X178)	168	8
25	Not Available	2	0
<b>Total</b>		<b>266</b>	

It can be observed from Table No. 6.5 that, there were 226 organizations involved in research activity. The organizations that have contributed their research output in the year 2007-2016. It found that Western University contributed with 19 publications in the first rank respectively.



## 6.6 GEOGRAPHICAL DISTRIBUTION OF RESEARCH OUTPUT

**Table No. 6.6 - Geographical Distribution of contributions**

Sr. No.	Country	Frequency	Percentage
1	Canada	96	36.09
2	United States	31	11.65
3	France	22	8.27
4	United Kingdom	8	3.01
5	China	6	2.26
6	Australia	5	1.88
7	South Korea	4	1.50
8	Belgium	3	1.13
9	Benin	2	0.75
10	South Africa	2	0.75
11	One time Country (1X85)	85	31.95
12	Not Available	2	0.75
<b>Total</b>		<b>266</b>	<b>100.00</b>

Table No. 6.6 shows the Geographical distribution of contributions at national and international level. It indicates that the majority of the contributions were contributed from Canada 96 (36.09), followed by United States 31 (11.65) respectively.

## 6.7 NUMBER OF PAGES WISE DISTRIBUTION OF THE ARTICLE

**Table No. 6.7: Number of Page wise Distribution of the Article**

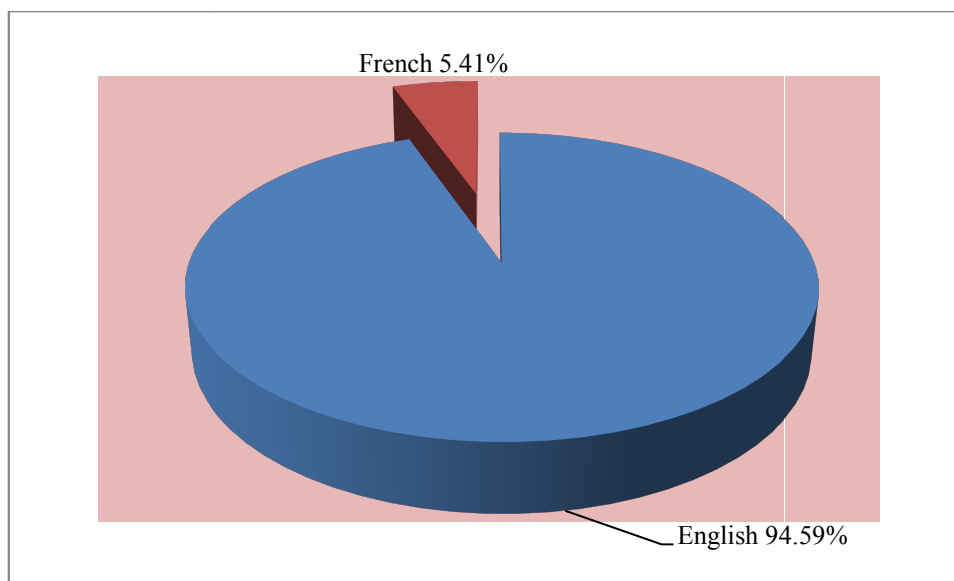
Sr. No.	Length of Pages	Frequency	Percentage
1	1-5	7	4.73
2	6-10	9	6.08
3	11-15	34	22.97
4	16-20	40	27.03
5	21-25	30	20.27
6	26-30	15	10.14
7	31-35	7	4.73
8	36-40	6	4.05
<b>Total</b>		<b>148</b>	<b>100.00</b>

It can be observed from Table no.6.7, that the highest number of pages in group of 16-20 i.e. 40(27.03%) pages, followed by in group of 11-15 i.e. 34(22.97%), followed by in group of pages 21-25 i.e. 30 (20.27%).

## 6.8 LANGUAGE-WISE DISTRIBUTION OF ARTICLES

**Table No. 6.8: Language-wise Distribution of Articles**

Sr. No.	Language	Frequency	Percentage
1	English	140	94.59
2	French	8	5.41
<b>Total</b>		<b>148</b>	<b>100.00</b>



From table no. 6.8 Show that, the language wise distribution of Article. Total 148 Article was published in “Canadian Journal of Information and Library Science” from 2007 to 2016. All the articles were published in English and French language, it found that the 140 (95.59%) articles published in English language and remaining articles are published in French language i.e. 8 (5.41%).

## 6.9 DISTRIBUTION OF KEYWORDS

Table No. 6.10: Distribution of Keywords

Sr. No.	Keyword	Frequency	Rank
1	Information Literacy	5	1
2	Canada	4	2
3	Communication	4	2
4	Image Retrieval	4	2
5	Information Seeking	4	2
6	Public Libraries	4	2
7	Academic Libraries	3	3
8	Cloud Computing	3	3
9	Discourse Analysis	3	3
10	Indexing	3	3
11	Information Behavior	3	3
12	Librarians	3	3
13	Libraries	3	3
14	Professional Identity	3	3
15	Records Management	3	3
16	Research	3	3
17	Survey	3	3
18	Tagging	3	3
19	Two Time Keyword (2X34)	68	4
20	One Time Keyword (1X108)	108	5
Total		237	





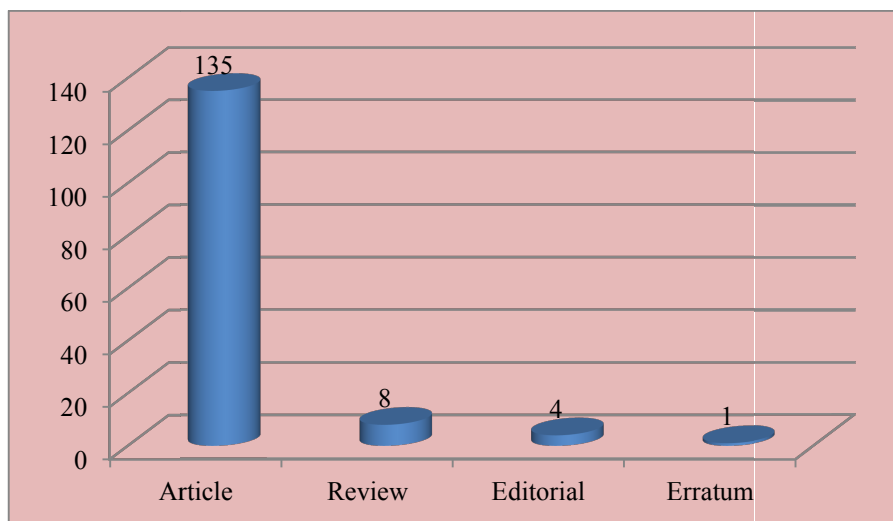
Out of 148 articles it is found that near about 237 keyword use in their study, it is seen that the high frequency keywords were Information Literacy (5), Canada, Communication, Image Retrieval, Information Seeking, Public Libraries (4), Table gives a list of keywords appeared in the articles.

## 6.10 DISTRIBUTION OF LITERATURE IN VARIOUS CHANNELS OF COMMUNICATION

Channel, in communications, refers to the medium used to communicate information from a sender (or transmitter) to a receiver. Researchers communicated their publication through variety of communication channels.

**Table No. 6.10 - Channels of Communication wise distribution**

Sr. No.	Channels of Communication	Frequency	Percentage
1	Article	135	91.22
2	Review	8	5.41
3	Editorial	4	2.70
4	Erratum	1	0.68
Total		148	100.00



**Figure No.6.11 Channels of Communication wise distribution**

It can be observed from table No. 6.10 and Figure No. 6.10 show that, of the Literature was published in articles 135 (91.22%), Followed by Review 8 (5.41%) , Editorial 4 (2.70%), Erratum 1(0.68%).

## 7. FINDINGS AND CONCLUSION

The findings are based on the analysis of collected data appended in 110 articles in Journal of arthropod – Borne Disease, These are following.

- ✓ The highest numbers 22 (14.86%) of papers were published in 2015 contributing.
- ✓ Only Western University contributed in first rang (19) while the other institution each contributed respectfully.
- ✓ 95 countries carrying out research and produced 148 articles. Canada is the top producing country with 96 (36.09%) publications of the total output.



- ✓ All the articles were published in English 140 (94.59%) and French 8 (5.41%) language.
- ✓ The majority 135 (91.22%) of publications is articles.

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