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SCIENTOMETRIC ANALYSIS OF INTERNATIONAL JOURNAL OF HEALTH INFORMATICS IN DEVELOPING COUNTRIES

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ABSTRACT:

The paper presents a Scientometric analysis of 76 articles, published in 5 volumes, during the year 2011-2015 of the International Journal of Health Informatics in Developing Countries "Online Information Review". The Result indicates that in all the years under the coverage of the study, the year 2011 shows the maximum number of contributions. Majority of articles are contributed by two authors. Among two authored contributions. Pablo Torres affiliated to Statistics and Epidemiology, RTI International Research Triangle Park, NC, USA is found to be highest score whose contribution is to be found in every issue. Saudi Arabia ranks second with a meager percentage, and average number of pages per article ranges 13.22.

KEYWORDS: ***Scientometric, online information review, Journal, Health Informatics in Developing Countries***

INTRODUCTION

Scientometric is the science of measuring and analyzing science . In practice , Scientometrics is often done using bibliometrics that is measurement of (Scientific) Publications. In 1960, Vassily V. Nalimove had coined the term scientometrics. Modern Scientometrics is primarily based on the work of Derek J. de Solla Price and Eugene Garfield. The latter founded the Institute of scientific Information (ISI), which carries out scientometric analysis.

Scientometric studies broadly constitute quantitative analyses of scientific literature to reveal the latest developments in various fields and the patterns of geographical distribution of science and scientific productivity of individual nation.

SOURCE JOURNAL

Online information Review – Journal of International Journal of Health Informatics in Developing Countries is the source of present study. It is the leading journal in Health Informatics in Developing Countries which is of international level. The Journal of Health Informatics in Developing Countries (JHIDC) publishes two volumes every year, in December and in June.

OBJECTIVE OF THE STUDY

The following objectives have been formulated for the present study. The objectives of the study are to determine the following.

- To sketch the volume wise distribution & to find out the per capita of productivity per volume.
- To find out geographical distribution.
- To find out highly contributed authors in journal.
- To examine the authorship pattern.
- To find out the research productivity count of the contributions at international levels.
- To observe the quantum of page in different volumes.
- To find out Affiliation of contribution

METHODOLOGY

The bibliographic data pertaining to each of the 76 records in each of the Issues of volumes 5-9 of the journal have been counted and analyzed fulfilling the objectives of the study.

DATA ANALYSIS

1) Distribution of Contributions (volume wise)

The distribution of contributions is shown in table No.1

Table No.1 Distribution of Contributions

Year	Vol .No	No. of Issue	No. of Contributions	Percentage
2011	5	2	20	26.32
2012	6	2	15	19.74
2013	7	2	15	19.74
2014	8	2	18	23.68
2015	9	2	8	10.53
Total		**10**	**76**	100

Table No.1 and Figure No.1 the distribution of contribution volume- wise , table No.1 depicts that out of 76 contributions, 20 (26.32%) contributions were contributed in 2011, 15 (19.74%) of them were contributed in 2012 and 2013 however 18 (23.68%) of them were published in the year 2014, and the rest of 8 (10.53%) contribution were contributed in the year 2015. It is inferred from the table no.1 of distribution of contributions from 2011-2015 that the level of the percentage of distribution has decreased. A notable attribute of the study is that the year 2011. Shows the maximum number of contributions.

2) Distribution of contributions (Issue wise) .

The distribution of contributions is shown in table No. 2

Table No.2 Distribution of Contributions (issue wise)

Month	Volume Number				
	2011(5)	2012(6)	2013(7)	2014(8)	2015(9)
December	11	8	8	9	6
June	9	7	7	9	2
Total	20	15	15	18	8

Table No.2 shows the distribution of contributions (issue –wise) . Table no.2 shows published in year of Journals volume no. 5 (20) shows the highest number of total contributions.

3) Authorship Pattern of Contributions

The authorship pattern of contributions is for shown in Table No.3 .

Table No.3 Authorship Pattern of Contribution

No. of Authors	No. of Contribution	Total No. of Authorship	Percentage
Single Author	76	76	32.76
Two Author	57	133	24.57
Three Author	47	180	20.26
Four Author	24	204	10.34
Five Author	12	216	5.17
Six Author	10	226	4.31
Seven Author	**6**	**232**	2.59
Total	**232**		100

Table No.3, displays the authorship pattern of contributions out of total 76 contributions, single author has contributed 32.76% percent of the total articles.24.57% percent of the contributions were published with two author articles, a three author has contributed 20.26% percent of the total articles, 10.34% percent of the contributions were published with four authors, 5.17% percent of the contributions were published with five author, 2.59% percent of the contributions were published with more than six author. A significant note of the study is that the majority of the articles are contributed by co- author.

4) Authorship Pattern of Contributions (Volume –wise)

The authorship pattern of contributions is revealed in table in 4 given below.

Table No.4 Authorship Pattern of Contribution (Volume –wise)

Vol. No.	Single Author	Two Author	Three Author	Four Author	Five Author	Six Author	More than 7 Author	Total	Percentage
2011 (5)	20	13	8	4	3	2	1	51	21.98
2012 (6)	15	12	12	5	4	3	2	53	22.84
2013 (7)	15	13	10	5	3	1	1	48	20.69
2014 (8)	18	12	10	7	1	1	1	50	21.55
2015 (9)	8	7	7	4	2	2	0	30	12.93
Total	**56**	**44**	**39**	**21**	**10**	**7**	**4**	232	100

Table No.4 Shows the authorship pattern of contributions. volume-wise regarding contributions by a single author, volume no.6 records the highest percentage, However the two author contributions, vol. No.5 and 7 shows the maximum percentage where as the three author contributions , vol. No.8 depicts the highest percentage of the four author contributions volume no.8, reflects the maximum percentage . So it may be concluded that co- authors contributions has the maximum percentage .

5) Geographical distribution of contributions in International level

The geographical distribution of contribution International level is show in Table No.5.

Table No.5 Geographical distribution of contribution in International level

Rank	Country	Contribution	Cumulative	Percentage
1	USA	21	21	9.05
2	Saudi Arabia	20	41	8.62
3	Nigeria	18	59	7.76
4	India	18	77	7.76
5	Malaysia	17	94	7.33
6	Egypt	12	106	5.17
7	Australia	11	117	4.74
7	Norway	11	128	4.74
7	United Kingdom	11	139	4.74
8	Tanzania	8	147	3.45
9	Kenya	6	153	2.59
10	Dentistry	5	158	2.16
10	Singapore	5	163	2.16
10	South Africa	5	168	2.16
10	Sri Lanka	5	173	2.16
11	Iran	4	177	1.72
12	Mauritius	3	180	1.29

12	Minnesota	3	183	1.29
12	Pakistan	3	186	1.29
12	West Indies	3	189	1.29
13	Ghana	2	191	0.86
13	Madagascar	2	193	0.86
13	Manipal	2	195	0.86
13	Sweden	2	197	0.86
13	Tehran, Iran	2	199	0.86
13	Turkey	2	201	0.86
13	Vietnam	2	203	0.86
14	Bangladesh	1	204	0.43
14	Canada	1	205	0.43
14	Finland	1	206	0.43
14	France	1	207	0.43
14	Libya	1	208	0.43
14	Malawi	1	209	0.43
14	Philippines	1	210	0.43
14	Uganda	1	211	0.43
		211		90.95
	Not Mentioned	12		5.17
	total	232		96.12

Table No.5 shows the geographical distributions of contributions at International level 21(9.05%)% of contributions came from USA; 20 (8.62%) percent of contributions came from Saudi Arabia; 18 (7.76%) percent of contributions came from Nigeria and India; 17 (7.33%) percent of contributions came from Malaysia; 12 (5.17%) percent of contributions came from Egypt ; 11 (4.74%) percent of contributions came from Australia, Norway and United Kingdom; 8(3.45%) percent of contributions came from Tanzania; 6(2.59%) percent of contribution came from Kenya. 5 (2.16%) percent of contributions came from Dentistry, Singapore, South Africa, Sri Lanka; 4(1.72%) percent of contribution came from Iran; 3 (1.29%) percent of contributions came from Mauritius, Minnesota, Pakistan, West Indies; 2(0.86%) percent of contribution came from Ghana, Madagascar, Manipal, Sweden, Tehran, Turkey and Vietnam; 1 (0.43%) percent of contributions came from Bangladesh, CANADA, Finland, France, Libya, Malawi, Philippines, Uganda. However, it is inferred that our of the above mentioned 33 countries, USA & Saudi Arabia give partiality far research when compared to other countries .

6) Average Page (per volume and per contribution) contribution

The average page in showed in table in no.6

Table No.6 Average Page Contribution

Vol. No.	Total Pages	No. of Articles	Average
2011(5)	270	20	13.5
2012(6)	182	15	12.13
2013(7)	186	15	12.4
2014(8)	274	18	15.22
2015(9)	93	8	11.62

In the study average – wise contributions 18(15.22%) articles had the maximum number of pages. 20 articles for total pages 270 and percentage of (13.5%) and then 15 articles and covered pages 182 (12.13%) then 15 pages covered articles of 186(12.4%) 8 articles is covered pages of 93 percentage of 11.62% this is a respectively. It is four that the wise studies 18(15.22%) articles the table pages but the studies average wise 13.22 the maximum pages in this table.

7) Affiliation of contribution

The Affiliation wise Distribution in showed in table in no.7

Table No.7 Affiliation Wise Distribution

Sr. No.	Affiliation Wise Distribution	Contributions	Rank
1	Clinical Research Centre, Ministry of Health, Malaysia	13	1
2	Collage of Public Health and Health Informatics, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia	9	2
3	Centre for Rural and Remote Oral Health, The University of Western Australia, Nedlands, Western Australia	4	3
4	EngenderHealth, 440 9th Ave. Fl 13, New York, NY, 10001 USA	4	3
5	Nanyang Technological University	4	3
6	Obafemi Awolowo University, Computer Science and Engineering Department, Ile-Ife, Nigeria	4	3
7	St. John's Research Institute, St. John's National Academy of Health Sciences, India	4	3
8	The University of Sheffield, United Kingdom	4	3
9	University of Cape Town, South Africa	4	3
10	Covenant University, Ota, Ogun state, Nigeria	3	4
11	Department of Computer Science, University of Southern Maine, USA	3	4
12	Department of Informatics, University of Oslo, Norway	3	4
13	Department of Information Science, Loughborough University, Loughborough, UK	3	4

14	Directorate of Research, University of Calabar, Nigeria	3	4
15	Global Information Infrastructures Group Department of Informatics	3	4
16	IITM's Rural Technology and Business Incubator, Chennai, India	3	4
17	Innovation and Best Practice Team, Marie Stopes International, London, United Kingdom	3	4
18	National Institute of Health and Family Welfare, New Mehrauli Road, Munirka, New Delhi, India	3	4
19	Public Health Department and Community Medicine, Faculty of Medicine,	3	4
20	Community Dental Unit, Dental Institute, Colombo, Sri Lanka	2	5
21	Department of Electrical Engineering, IITM, Chennai, India	2	5
22	Karolinska Institutet, Department of Public Health Sciences, Stockholm, Sweden	2	5
23	Law and Arts, University of Southern Queensland,	2	5
24	Marie Stopes Madagascar, Antananarivo, Madagascar	2	5
25	Medical Sciences Library, The University of the West Indies, St. Augustine, Trinidad and Tobago	2	5
26	Ministry of Health, Nairobi, Kenya	2	5
27	Public Health Department, Faculty of Medicine, Cairo University, Egypt	2	5
28	Public Health Department, Theodor Bilharz Research Institute, Egypt	2	5

29	School of Clinical Sciences, Queensland University of Technology, Brisbane, Queensland, Australia	2	5
30	School of Computing & Informatics, University of Nairobi, Nairobi, Kenya	2	5
31	Telemedicine and e-health research group, University of Tromso, Norway	2	5
32	University of Ghana Business School, Ghana	2	5
33	University of Mauritius	2	5
34	University of Oslo, Norway	2	5
35	**One Author cited by (111X1)**	**111**	**6**
	Not Mention Author	**11**	
Total		**232**	

TableNo.7 shows the Affiliation wise contributions 13 contributions 'Clinical Research Centre, Ministry of Health, Malaysia' had the top of the position. Second position of the contributions 'Collage of Public Health and Health Informatics, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia' in this table.

FINDINGS

Following are the findings of the study.

- 2011has the highest score with 26.32% followed by 2012 & 2013 with 19.74. It was 8% in 2015.
- Signal authored publications amount to 32.76%.
- Regarding contributions by two authors , volume 5 (2011) records the highest percentage.
- Contribution from the USA get the highest score with 9.05%.
- Average number of pages per article ranges 10.88 approximately.

CONCLUSION

All the years under the coverage of this study, the year 2011 shows the maximum number of contributions. Majority of the articles are contributed by two authors. Two authorship pattern gaining an edge over joint and collaborative publications. Among two authored contributions, Pablo Torres affiliated to statistics an Epidemiology, RTI International Research Triangle Park, NC, USA is found to be Highest Score whose contribution is to be found in every issue. Saudi Arabia ranks second with a meager percentage and average number of pages per article ranges 13.12.

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