Scientometric Measures in Diabetics Research Publications in India: 1989-2013

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Abstract

This study has been carried out to analyze the research field of Diabetic research in terms of publication output as per Science Citation Index (1978-2012) from Web of Science. During 1989-2013 a total of 4410 papers were published by the scientists in the field of Diabetic Research Output. The highest numbers of papers 615 were published in 2013. There were 67 countries involved in the research in this field. The most productive author is Mohan V with 123 papers dealing with Diabetics research in India'. The most productive Journal is Journal of Ethno pharmacology with 133 papers dealing with Diabetics research in India'.

Keywords

Scientometrics, exponential growth rate, Source wise distribution.

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INTRODUCTION

Now a days the Scientometrics, research publications are clearly one of the quantitative measures for the basic research activity in a country. It must be added, however, that what excites the common man, as well as the scientific community, are the peaks of scientific and technological achievement, not just the statistics on publications. Many Scientometrics studies have appeared in the literature to focus on the performance of science in the field of Diabetics research in India'.

Objectives

The main objective of the study is

- To present the growth of world literature in Scientometrics deposition and make the quantitative assessment of the research in terms of year-wise research output.
- Geographical distribution of research output.
- Characteristics of highly productive institution and
- The channel of communication used by the scientists

METHODOLOGY

Data was collected from the Science Citation Index (SCI) which is available via the Web of Science (WoS). The WoS is the search platform provided by Thomson Reuters (the former Thomson Scientific emerged from the Institute for Scientific Information (ISI) in Philadelphia). SCI database is one of the very comprehensive databases covering all aspects of science. The study period (1989-2013) is selected as the database is available in machine from since 1982. The search string "Diabetics in India" the "Basic search**"** field of SCI was used for the year s 1989-2013 to download the records on the subjects 'Diabetics research in India'. A total of 4410 records were downloaded and analyzed by using the web of science website application as per the objectives of the study

LITERATURE REVIEW

Vimala, V & Pulla Reddy, V (2009) traced authorship pattern and collaborative research in zoology[1.] Zafrunnisha, N. & Pulla Reddy, V (2009) studied authorship trend and collaborative authorship pattern and collaborative research in the field of Psychology.[2.] Amsaveni. N & Vasanthi. R (2013) traces the trend in authorship pattern and

collaborative research in network security during Maheswarappa. B.S, & Shirol M.V. (1990) studied the authorship pattern and collaborative research in psychology.[4] Thavamani, K. & Velmurugan, C. (2013) studied the analysis has been conducted with 310 contributions published in the journal during the year 2002 – 2012.[5.] Tamilselvi, A & Nithyanandam, K. (2013) studied articles by year, authorship patterns, citation analysis and geographical distribution of authors.[6.] Bakri, A. & Willett, P (2008) studied the range of articles published per volume, average number of references per article, the average

Sl. No	Public ation Year	Recs	%	TLCS	TGCS
1	1989	8	0.2	1	47
2	1990	20	0.5	130	334
3	1991	37	0.8	45	368
4	1992	33	0.7	46	373
5	1993	29	0.7	102	486
6	1994	37	0.8	53	405
7	1995	36	0.8	88	637
8	1996	49	1.1	163	1151
9	1997	54	1.2	156	829
10	1998	56	1.3	188	835
11	1999	64	1.5	278	1397
12	2000	70	1.6	310	1699
13	2001	69	1.6	224	1193
14	2002	112	2.5	644	3260
15	2003	124	2.8	548	2507
16	2004	148	3.4	626	4068
17	2005	192	4.4	693	4166
18	2006	200	4.5	575	3926
19	2007	236	5.4	503	4605
20	2008	353	8.0	510	3563
21	2009	432	9.8	532	5087
22	2010	434	9.8	359	3586
23	2011	455	10.3	233	2760
24	2012	547	12.4	169	2073
25	2013	615	13.9	49	987
Total		4410	100.00	7225	50342

During 1989-2013 a total of 4410 publications were published in Diabetic Research in India. The highest number of publications 615 was produced in 2013. Table 1 was given year wise growth and collaboration rate in diabetics research in India. It can be clearly visualized from the table1 that growth of the literature was very low during 1989.

2002 to 2011 was measured.[3.] Karisiddappa, C.R, length per article pages; the percentage of multi-authored papers, geographically affiliation.[7.] Jena, Kamal Lochan (2006) traced the trend of publications such as the year wise distribution of articles, bibliographical distribution of citations, authorship pattern, citation pattern, average length of articles, number of tables and figures used, time lag, geographical distribution of authors and subject analysis have been studied.[8]

Table 1(a) : Exponential growth rate of publications

Sl.No	Publication Year	Records	Exponential Growth rate
1	1989	8	-
2	1990	20	2.50
3	1991	37	1.85
4	1992	33	0.89
5	1993	29	0.88
6	1994	37	1.28
7	1995	36	0.97
8	1996	49	1.36
9	1997	54	1.10
10	1998	56	1.04
11	1999	64	1.14
12	2000	70	1.09
13	2001	69	0.99
14	2002	112	1.62
15	2003	124	1.11
16	2004	148	1.19
17	2005	192	1.30
18	2006	200	1.04
19	2007	236	1.18
20	2008	353	1.50
21	2009	432	1.22
22	2010	434	1.00
23	2011	455	1.05
24	2012	547	1.20
25	2013	615	1.12
Total		4410	29.63

The above table reveals that the exponential growth rate of publication on diabetic research in India during 25 years (1989 to 2013). An exponential growth in number of publication was observed during 1989 to 2013. The highest growth rate is 2.50 percents found during 1990 with 20 publications followed by 1.85 percents at 1991 with 37 publications, 1.62 percents at 2002 with 112 publications. It was found very low growth rate at the year of 1993 with39 publications. The total exponential growth rate value is 29.63; it is found the

average exponential growth rate is 1.19 percentages .

Table 2: Country wise documents distribution (Top 10)

S.No	Country	Recs	Percent	TLCS	TGCS
1	India	4336	98.3	7158	49457
2	USA	244	5.5	249	4290
3	UK	93	2.1	98	1760
4	Unknown	42	1.0	53	294
5	Australia	36	0.8	45	588
6	Canada	35	0.8	165	873
7	Malaysia	33	0.7	20	236
8	South Korea	29	0.7	27	485
9	Peoples R China	27	0.6	4	561
10	Saudi Arabia	27	0.6	5	117

Table 3: Top 15 most productive Authors

S.No	Author	Recs	TLCS	TGCS
1	Mohan V	123	400	2689
2	Kumar A	79	134	954
3	Pari L	67	428	1231
4	Ramachandran A	66	114	1099
5	Gupta A	57	27	548
6	Snehalatha C	53	88	803
7	Sharma S	51	78	680
8	Sharma T	50	118	537
9	Kumar S	45	16	242
10	Raman R	45	101	316

for sample periods

11	Srivastava AK	44	44	458
12	Paulose CS	43	56	237
13	Bhansali A	42	29	394
14	Deepa R	42	250	1477
15	Chopra K	40	136	954

The most productive author is Mohan V with 123 papers dealing with diabetics' research field in India. The authors of the seminal publication on diabetics' research in India given Table-3, Kumar A appear on rank 2 (79 papers) and Pari L R appeared on rank 3 (67 papers), respectively.

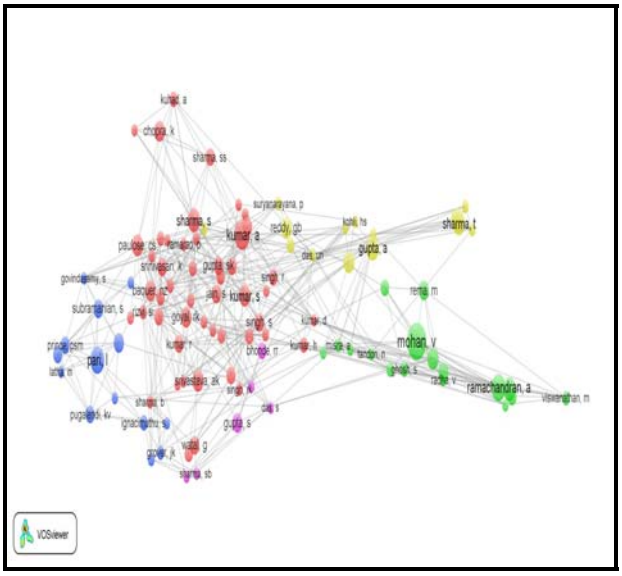


Table 4: Top 10 most productive Journal

S.No	Journal	Recs	Percent	TLCS	TLCS/t	TGCS	TGCS/t	TLCR
1	Indian Journal of Pharmacology	133	3.0	39	8.85	128	36.00	78
2	Journal Of Ethnopharmacology	133	3.0	1436	137.17	5218	541.44	525
3	Diabetes Research And Clinical Practice	90	2.0	156	12.84	1201	126.13	77
4	International Journal Of Diabetes In Developing Countries	78	1.8	16	3.80	171	41.55	72
5	Molecular And Cellular Biochemistry	71	1.6	282	28.67	1316	171.04	160
6	Pharmaceutical Biology	62	1.4	122	18.18	282	53.82	179
7	Indian Journal Of Experimental Biology	54	1.2	55	12.07	308	70.57	140
8	Phytotherapy Research	51	1.2	246	24.11	1053	125.84	92
9	Diabetes Care	48	1.1	118	14.55	1437	237.50	45
10	European Journal Of Pharmacology	48	1.1	125	25.42	728	161.29	119

The most productive Journal is Journal of Ethno pharmacology with 133(3.00 %) papers dealing with diabetics' research field in India followed by (133) 3 percent in Indian Journal of Pharmacology,(90) 2 percent Diabetes Research And Clinical Practice.

Table 5: Source wise distribution of documents

S.No	Document Type	Recs	%	TLCS	TGCS
1	Article	3613	81.9	6629	41973
2	Meeting Abstract	301	6.8	2	14
3	Review	274	6.2	464	6953
4	Letter	93	2.1	22	200
5	Article; Proceedings Paper	70	1.6	56	747
6	Editorial Material	28	0.6	6	114
7	Note	21	0.5	45	301
8	Correction	6	0.1	1	3
9	Article; Book Chapter	2	0.0	0	0
10	Reprint	1	0.0	0	5
11	Review; Book Chapter	1	0.0	0	32

Diabetics' research Scientists communicated their research results through a variety of communication channels. Table - 5 provides the distribution of publications in various channels of communication. It was observed that (3613) 81.9 percent of the article was published in Article followed by (301) 6.8 percent in Meeting Abstract, (274) 6.2 percent in Review, (93) 2.1 Percent in Letter, (70) 1.6 percent in Article; Proceedings Paper.

Table 6 :Language wise distribution of documents

S.No	Language	Recs	Percent	TLCS	TGCS
1	English	4405	99.9	7224	50329
2	French	2	0.0	1	13
3	German	2	0.0	0	0
4	Portuguese	1	0.0	0	0

Table – 6 The Diabetics' research field in India have contributed more predominantly in English languages as 4405 (99.9%) publications were in English followed by French as 2 (0.00%) Publications.

Table 7: **Institution wise documents distribution (First - 10 Documents)**

S.No	Institution	Recs	%	TLCS	TGCS
1	Annamalai Univ	203	4.6	898	3489
2	All India Inst Med Sci	197	4.5	483	3181
3	Univ Madras	141	3.2	482	2139
4	Postgrad Inst Med Educ & Res	107	2.4	58	1002
5	Madras Diabet Res Fdn	94	2.1	352	2286
6	Panjab Univ	92	2.1	166	1706
7	Banaras Hindu Univ	84	1.9	44	560
8	Univ Delhi	70	1.6	122	725
9	Cent Drug Res Inst	61	1.4	101	1170
10	Cent Food Technol Res Inst	59	1.3	207	1437

There were 2633 institutions involved in research activity in the field Diabetics' research field in India. Table-7 provides publication productivity of top 10 institutions. Annamalai University topped the list with 175 publications followed by All India Inst Med Science with 203 publications; All India Institute of Medical Sciences 197 and University of Madras 141 publications.

CONCLUSION

In this study the literature on Diabetics' research field in India, a promising new material, has been analyzed by Scientometric methods. The time evolution of the overall number of citations reveals that the impact increase of the Scientometrics papers is possibly going to outrun the impact increase of the related research fields on Diabetics' research field in India. The highest number of publications 615 was produced in 2013. The most productive author is Mohan V with 123 papers dealing with Diabetics' research field in India.. The most productive Journal is Journal of Ethno pharmacology with 133 papers dealing with Diabetics' research subjects. Types of

documents, the format of Article are the highest. Finally more contributed and communicated Language is English language.

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