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Study of Indian Publications Output on Diabetes

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Abstract

This study attempts to document the Indian publications output on diabetes in the global literature, which is available in the electronic form using mapping technique. The data for this study were retrieved from the 'Web of Science' database. Using search string in Web of Science, the term 'Diabetes' in 'article title, abstract and keywords' published from 1st January 1925 to 2nd February 2015 and all types were analyzed. The result indicates that the large number of publications in Diabetes was reported in the year 2013, with a total of 886 documents. In institution-wise analysis reveals that, All India Institute of Medical and Science (448) top the list followed by Madras Diabetes Research Foundation (233) had contributed high number of literature in Diabetes. The result showed that out of 4 languages, English had 7083 literature in Diabetes and stood first among the all source languages. The analysis reveals that 'article' has constituted 5570 of total documents of source, followed by 'Review'. Among all authors globally "Mohan" has published 352 items in Diabetes literature and the top contributor in Diabetes with a citation score of 5858. 'Diabetes Research and Clinical Practice' has published maximum of 184 publications in Diabetes. From this study, it was concluded that more works on Diabetes should be encouraged nationally throughout the country.

Keywords: Mapping, Database and Diabetes.

Conceptual Framework

According to International Diabetes Federation (2015) estimates indicate that 415 million adults have diabetes; it also predicted that by 2040 this will rise to 642 million. Further IDF stat also reveals that every 6 seconds a person dies from diabetes and 1 in 11 adults have diabetes. IDF data also 12% of global health expenditure is spent on diabetes. This paper attempts to give a complete profiling of the literature on 'Diabetes'. A Citation Map is a graphical representation that shows the citation relationships (cited references and citing articles) between a paper and other papers using various visualization tools and techniques. Increasingly mapping and bibliometrics are being used as a measure of research impact or research influence. Bibliometrics analyses quantitative and qualitative data to describe publication patterns within a field of research. This information can be used to evaluate the influence/performance of a researcher and to provide a comparison between researchers. More broadly, speaking the results also help to determine university rankings and have an impact on university funding. The purpose of the present study was to study the Indian publications output on Diabetes research through publications in the global literature.

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Objectives

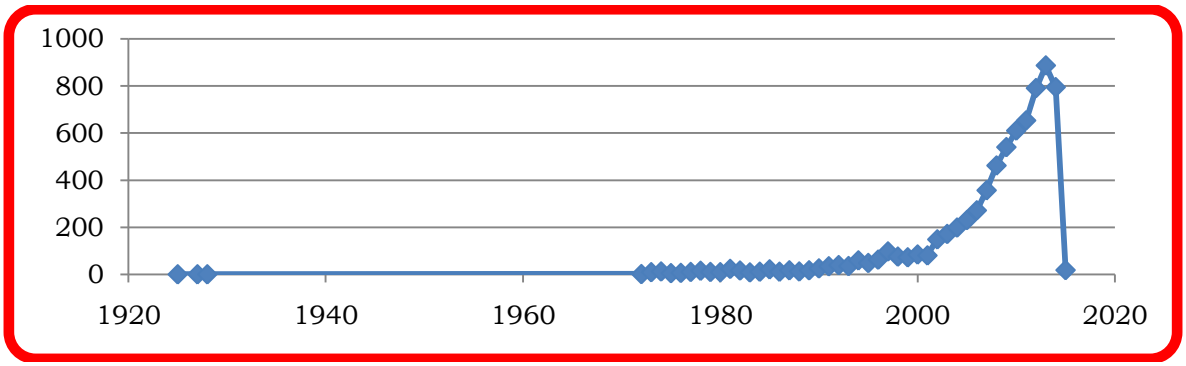
- To identify the year-wise growth of Diabetes literature.
- To list the top ten institutions with high productive literature in Diabetes.
- To analyse the language wise distribution of Diabetes literature.
- The document type wise classification of Diabetes literature.
- To know the most prolific authors of research publications in Diabetes.
- To know the top ten contributing Journals.

Database and Methodology

Web of Science is a bibliographic database containing abstract and citations of peer-reviewed literature. Web of Science is owned by Thomson Reuters and is available in online by subscription. The data for this particular study were retrieved from 'Web of Science' database on diabetes, which covers a time span of all years starting from 1st January 1925 to 2nd February 2015. Using search string in Web of Science, the term 'Diabetes' for getting data from the Web of Science database was limited to India which includes Science Citation Index (SCI), Social Science Citation Index (SSCI) and Arts and Humanities Citation Index (AHCI) all types were analyzed. In all, 7090 documents results

were found in Web of Science database. With the assistance of analyse result option, the data for analyse were collected. Using illustrations in the form of graph / table, the result of the study were discussed broadly.

Figure I. Year-wise classification of Diabetes literature



In Web of Science, literature pretended to Diabetes was limited to the India only. From the above graph, it was found that the total numbers of document available was 7090. Publication started in the year 1925 and in the years 2013, the maximum of 886 documents are published in Diabetes. The analysis also reveals that steady increase in the productivity was observed during the study period 2002 onwards.

Table I. Top ten institutions in publishing Diabetes literature

S.No	Institution	Records	%	TLCS	TGCS
1	All India Institute of Medical and Science	448	6.3	1683	12311
2	Madras Diabetes Research Foundation	233	3.3	1105	3853
3	Postgrad Institute of Medical Education& Research	216	3.0	216	2198
4	Annamalai University	179	2.5	751	3254
5	University of Madras	161	2.3	486	2400
6	Panjab University	108	1.5	246	1899
7	University of Delhi	95	1.3	153	851
8	Christian Medical College& Hospitality	89	1.3	127	1024
9	CSIR	89	1.3	110	606
10	Banaras Hindu University	84	1.2	57	617

TLCS= Total Local Citation Score **TGCS**= Total Global Citation Score

The analyses of institution-wise distribution have been contributed by 4940 institutions around the India. The researchers had taken top ten productivity institution for this analysis. By seeing the analysis, All India Institute of Medical and Science (448) top the list followed by Madras Diabetes Research Foundation (233). Top three higher productive institutions have got more citations as 12311, 3853 and 2198 respectively, while there is fluctuation in terms of citation scoring among the remaining institutions.

Figure II. Mapping of Institutions Productivity

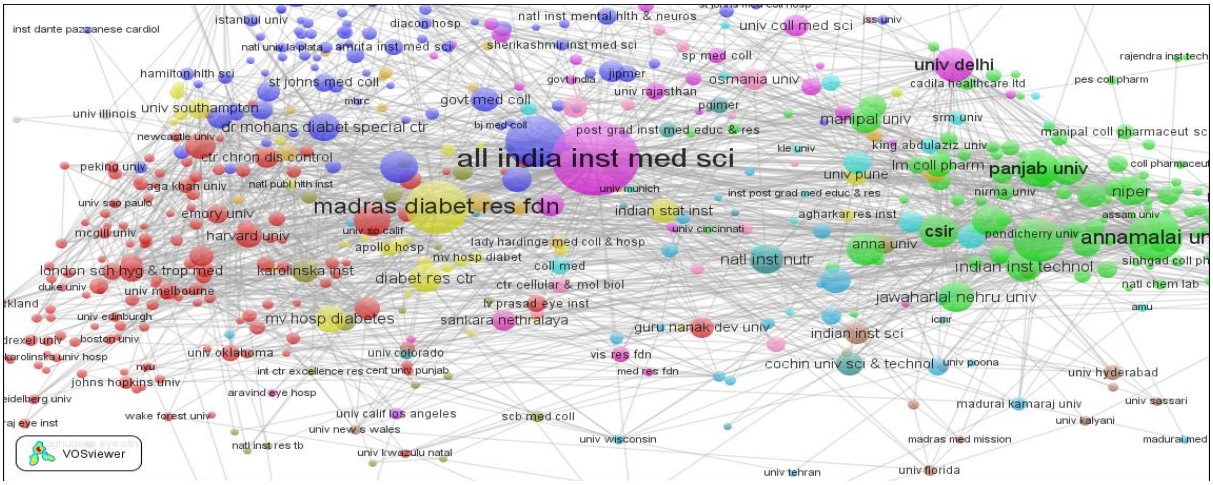


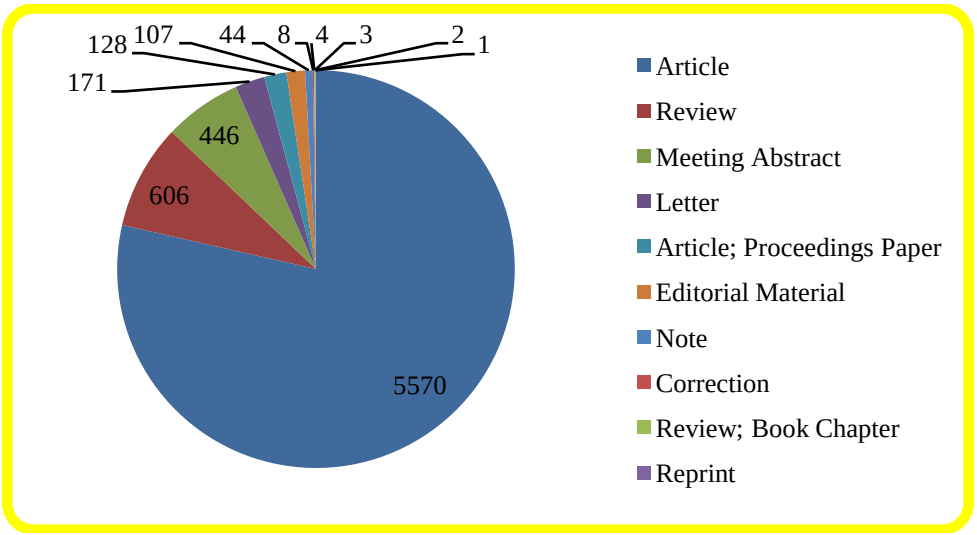
Table II. Language-wise distribution of publications

S.No	Language	Records	%	TLCS	TGCS
1	English	7083	99.90	13164	88159
2	German	3	0.04	0	1
3	French	2	0.03	2	13
4	Portuguese	2	0.03	0	0

TLCS= Total Local Citation Score **TGCS**= Total Global Citation Score

It could be noted that Diabetes scientist used to bring out their publication in different type of languages in India. The present investigation had taken published languages, which published Diabetes literature. Out of 4 languages, English reported 7083 literature and stood first among the all source languages.

Figure III. Document-wise distribution of publications



The result indicates that Diabetes literature has been classified into twelve types of documents. The above pie diagram indicates the numerical values of each document. The analysis reveals that 'article' has constituted 5570 of total documents of source, followed by 'Review'. Out of 7090 documents on Diabetes, more than 78.56% were in the form of 'article' type.

Table III. Top ten contributing authors

S.No	Author	Records	TLCS	TGCS
1	Mohan V	352	1935	5858
2	Ramachandran A	188	1445	5307
3	Snehalatha C	132	1328	4103
4	Kumar A	97	134	991
5	Bhansali A	92	120	835
6	Misra A	87	628	2593
7	Tandon N	74	127	509
8	Viswanathan M	74	711	1813
9	Deepa R	73	822	2197
10	Sharma S	73	123	854

TLCS= Total Local Citation Score **TGCS**= Total Global Citation Score

By analyzing the authorship pattern, at Indian level 16,688 authors have participated in publishing in Diabetes. The above table shows the top ten authors productivity on Diabetes. It also indicates the number of works done by each of them. Mohan has published 352 items in Diabetes literature and the top contributor in Diabetes with a citation score of 5858. The second major contributor was Ramachandran, who published 188 articles with a citation score 5307.

Figure IV. Mapping of Authors Productivity

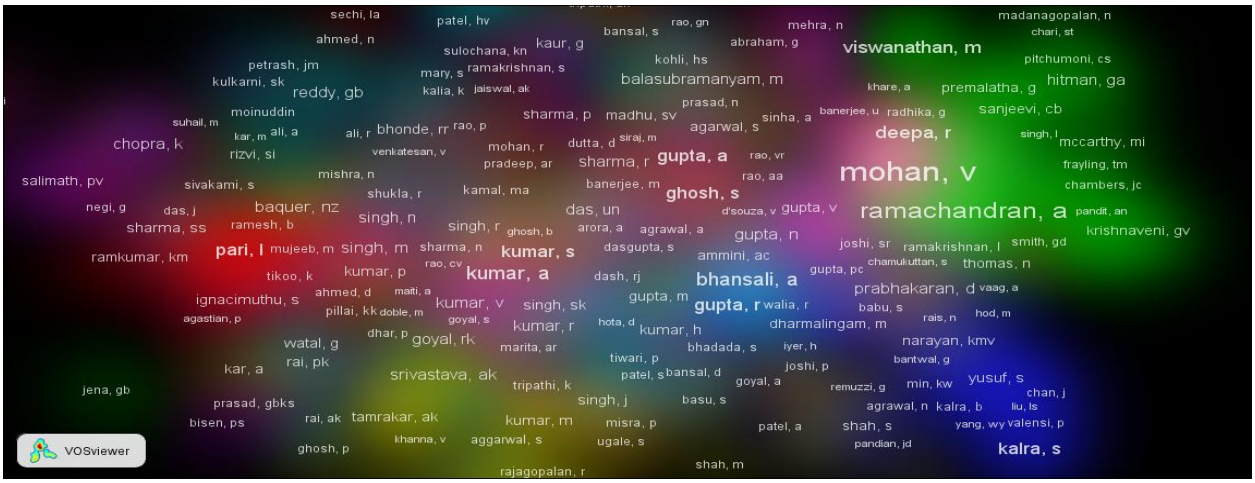


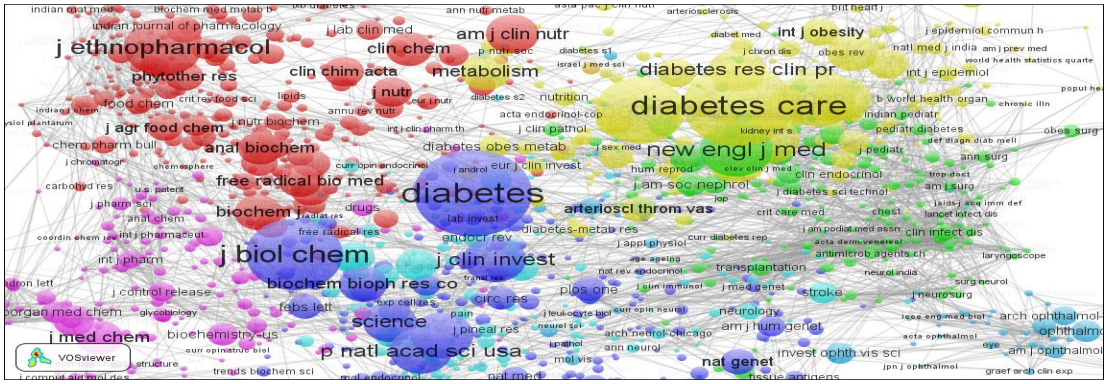
Table IV. Title-wise distribution of publications

S.No	Journal	Records	%	TLCS	TGCS
1	Diabetes Research and Clinical Practice	184	2.6	695	2298
2	Diabetologia	175	2.5	694	3155
3	Indian Journal of Medical Research	145	2.0	360	1383
4	International Journal of Diabetes in Developing Countries	127	1.8	93	248
5	Journal of Ethnopharmacology	124	1.7	1223	4878
6	Diabetes Care	103	1.5	666	3643
7	Indian Journal of Pharmacology	99	1.4	43	164
8	Plos One	95	1.3	0	599
9	Molecular And Cellular Biochemistry	89	1.3	286	1568
10	Diabetes Technology & Therapeutics	86	1.2	65	267

TLCS= Total Local Citation Score **TGCS**= Total Global Citation Score

It could be noted that Diabetes scientists were to bring out their publication in different type of source. The present investigation had taken top ten published journals, which published Diabetes literature. Out of 1458 Journals, 'Diabetes Research and Clinical Practice' has published 184 publications and stood first among the all source title.

Figure V. Mapping of Journals Productivity



Findings

1. The result indicates that the large number of publications in Diabetes was reported in the year 2013, with a total of 886 documents.
2. The result reveals that institution analysis, All India Institute of Medical and Science (448) top the list followed by Madras Diabetes Research Foundation (233) had contributed high number of literature in Diabetes.
3. The result showed that out of 4 languages, English reported 7083 literature and stood first among the all source languages.
4. The analysis reveals that 'article' has constituted 5570 of total documents of source, followed by 'Review'.
5. Among all authors globally "Mohan" has published 352 items in Diabetes literature and the top contributor in Diabetes with a citation score of 5858.
6. 'Diabetes Research and Clinical Practice' has published maximum of 184 publications in Diabetes.

Conclusions

For this study the data was taken from Web of Science database alone. There are very many printed journal and other electronic resources which could not be include in this study, due to various reasons. However to preserve the information and to enhance the academic excellence globally, literature in Diabetes, it should be in electronic form. From this study, it was concluded that more works on Diabetes should be encouraged nationally throughout the country.

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