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Citations and Self citations of Indian Authors in Pharmacy Journals: A Study Based on Indian Citation Index

Abstract

Indian Citation Index database is a powerful tool to search, track, and measure and collaborate in the sciences, social sciences, arts, and humanities. This article discusses the published research articles, citations and self-citations in the Pharmacy Journals which are available in Indian Citation Index. There are 26249 articles published from 6 Pharmacy Journals. Among the 6, Journal of Chemical and Pharmaceutical Research occupies first position with 7191 (27.40%) articles and International Journal of Pharmacy and Pharmaceutical sciences occupies second rank with 5416 (20.63%) articles and Research Journal of Pharmaceutical, Biological, and chemical sciences is in third 4639 (17.67%). In the year 2014, 6484 (24.70%) articles are published and it is highest when comparing to other years.

Keywords: Pharmacy, Indian Citation Index, Citations, Self Citations, JCI, RII, Uncited%.

Introduction

The true barometer of assessing the quality and quantity of a journal is the Citation Index. While discussing citation, one needs to understand what a citation is? Simply, when another refers other works in his/ her article, we call the article referred is cited. In other words the citation is called as the previous work which is referred in the present work. The quality of a given work can rightly be adjudged through the number of citations that it gets. Therefore, a certain piece of article or research paper carrying more number of citations get more impact than the work carrying less citations. Therefore, we always refer to some indexing and abstracting databases like Scopus, Web of Science, or even Google Scholars to know the impact of a Journal, a particular article or a particular author. Indian Citation Index which was initiated by Diva enterprises is just an indexing and abstracting database. This study attempts to analyze authors in the field of Pharmacy during 2009-2015. Further it is to find out the Journals which more cited and self-cited.

Review of Literature

David N, Maureen R views that, "bibliometric studies provide information about the structure of knowledge and how it is communicated?"¹

Moreover, bibliometric studies are normally employed to evaluate the academic research output, the quality of the journal, impact and influence of articles, authors, and assorted parameters. Though there has been substantial growth of literature on bibliometric studies during the last decade, the authors focus on some of the pertinent literature that relate to the present study. Potter WG defines bibliometric study as "the study and measurement of the publication patterns of all forms of written communication and their authorship".² In a most interesting study Mooghali A et al. analyzed records of three premiere indexes namely, "Social Science Citation Index", "Science Citation Index", and "Arts and Humanities Citation Index", and projected how the field of "scientometrics" evolved between 1980 to 2009.³ The pattern of growth of

literature in the field of Nano science during 1990 to 2009 was reported by Karpagam R et al.⁴ In the similar vein, Giovanni A exercised bibliometric techniques on some national level research assessment.⁵ Lapon-Kandelshein E et al. bibliographical research on Hebrew printing also needs mention.⁶ In the similar light bibliometric studies by veterans like Krampen G et al. and Kumar S et al. and others also presented findings on different directions.^{7,8} Dhanavandan S, Tamizhchelvan M studied research productivity and citations of universities in south Tamil Nadu from 2009 to 2013 based on Indian Citation Index.⁹ In extension to Dhanavandan and Tamizhchelvan's study, the present study covers in its scope a different time slot of publication ranging from 2009 to 2015. The main aim of the study is to analysis the citations and self-citations of Energy and Fuel Science Journals from Indian Citation Index articles for the period of 2004 to 2015.

Objectives of the Study

Based on the sources framed the following objectives:

1. To assess the strength of articles Pharmacy journals.
2. To analyses the year wise Citations and Self Citations.
3. To find out the journals JCI.
4. To assess the journals RII.
5. To identify the journals uncited %.

Distribution of Pharmacy Journals in ICI from 2009-2015 Vs Articles

Table 1. Distribution of Pharmacy Journals in ICI from 2009-2015 Vs Articles

S. No.	Year	IJPSR	IJPP	JCPR	JPR	RJPB	RJPT	Total	%
1	2009	-	79	37	478	-	202	796	3.03
2	2010	305	307	494	810	296	287	2499	9.52
3	2011	368	579	667	1399	475	399	3887	14.81
4	2012	303	1103	779	1202	544	292	4223	16.09
5	2013	544	955	926	198	686	266	3575	13.62
6	2014	682	1530	2457	255	1283	277	6484	24.70
7	2015	512	863	1831	13	1355	211	4785	18.23
	Total	2714	5416	7191	4355	4639	1934	26249	100
	%	10.34	20.63	27.40	16.59	17.67	7.37	100	

Table 1 indicates number of articles published in Pharmacy journals in Indian Citation Index. As per the Indian Citation Index, 6 journals are taken for this study for the period of 2009 to 2015. There are 26249 articles published from 6 Pharmacy Journals. Among the 6, Journal of Chemical and Pharmaceutical Research occupies first position with 7191 (27.40%) articles and International Journal of Pharmacy and Pharmaceutical

Methodology

The Citation analysis is one of the most widely used tools for measuring expertise in the field of study by way of calculating the impact factor, number of citations, etc. It is a control as well as measuring tools for country wise or subject wise. This study is aimed to discuss the analysis of the citation index in the field of Pharmacy Journals.

Analysis and Interpretation

The authors have been selected data from relevant sources from Indian Citation Index and the following discussions made for the period of 2009 to 2015. Remaining year's publications (Before 2009) will not be considered for this study. In this study denotes:

- IJPSR: International Journal of Pharmaceutical Sciences Review and Research
- IJPP: International Journal of Pharmacy and Pharmaceutical Sciences
- JCPR: Journal of Chemical and Pharmaceutical Research
- JPR: Journal of Pharmacy Research
- RJPB: Research Journal of Pharmaceutical, Biological and Chemical Sciences
- RJPT: Research Journal of Pharmacy and Technology

Sciences occupies second rank with 5416 (20.63%) articles, Research Journal of Pharmaceutical, Biological and chemical sciences is in third 4639 (17.67%). It is pointed out that the frequency of the Journals is varying and that is one of the reasons for the strength of articles. Further, in the year 2014, 6484 (24.70%) articles are published and it is highest when comparing to other years.

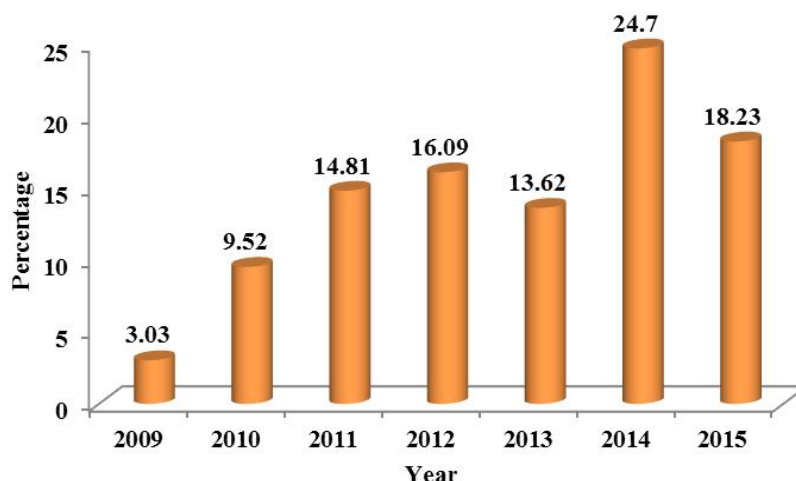


Figure 1. Distribution of Pharmacy Journals in ICI from 2009-2015 Vs Articles

Distribution of Pharmacy Journals based on Citations from 2009-2015

Table 2. Distribution of Pharmacy Journals based on Citations from 2009-2015

S. No.	Year	IJPSR	IJPP	JCPR	JPR	RJPB	RJPT	Total	%
1	2009	-	546	141	487	-	114	1288	9.82
2	2010	366	1233	367	646	233	13	2858	21.78
3	2011	271	1526	1520	699	245	68	4329	33.00
4	2012	69	1497	242	281	112	61	2262	17.24
5	2013	140	765	792	55	87	37	1876	14.30
6	2014	55	258	27	26	75	17	458	3.49
7	2015	5	30	4	1	9	0	49	0.37
	Total	906	5855	3093	2195	761	310	13120	100
	%	6.91	44.63	23.57	16.73	5.80	2.36	100	

Table 2 shows the citations of the Pharmacy Journals in Indian Citation Index for the years from 2009 to 2015. Among the 6 Journals, 13120 citations were available. Out of 13120, International Journal of Pharmacy and Pharmaceutical Sciences Journal occupy the first position with 5855 (44.63%) citations and Journal of Chemical and pharmaceutical Research is in the second position with 3093 (23.57%) citations for the 2009 to 2015 period.

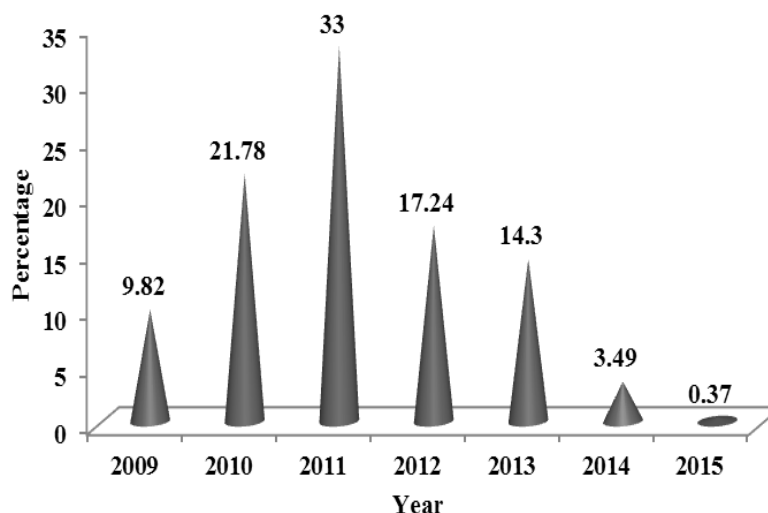


Figure 2. Distribution of Pharmacy Journals based on Citations from 2009-2015

Distribution of Pharmacy Journals Based on Self Citations from 2009-2015

Table 3. Distribution of Pharmacy Journals Based on Self-citations from 2009-2015

S. No.	Year	IJPSR	IJPP	JCPR	JPR	RJPB	RJPT	Total	%
1	2009	-	302	1	100	-	14	417	6.42
2	2010	52	766	1	136	0	4	959	14.77
3	2011	46	974	1069	139	26	16	2270	34.96
4	2012	23	1063	38	49	1	19	1193	18.37
5	2013	66	542	700	10	40	10	1368	21.06
6	2014	33	165	1	12	41	6	258	3.97
7	2015	1	25	0	0	3	0	29	0.45
	Total	221	3837	1810	446	111	69	6494	100
	%	3.40	59.09	27.87	6.87	1.71	1.06	100	

Table 3 represents the self-citations of the Pharmacy Journals which are available in Indian Citation Index from the year 2009 to 2015. Among the 6 Pharmacy Journals 6494 self-citations were identified for the period of 2009 to 2015. Out of 6494, International Journal of Pharmacy and Pharmaceutical Sciences

Journal occupy the first position with 3837 (59.09%) self-citations and Journal of Chemical and pharmaceutical Research is in the second position 1810 (27.87%) self-citations. Further Journal of Pharmacy Research is in third position 446 (6.87%) self-citations.

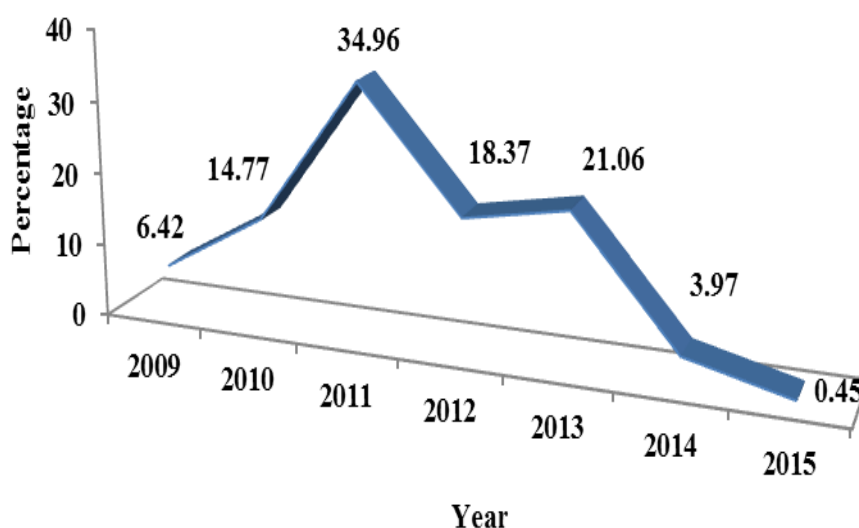


Figure 3. Distribution of Pharmacy Journals Based on Self-citations from 2009-2015

Distribution of Pharmacy Journals JCI

Table 4. Distribution of Pharmacy Journals JCI

S. No.	Year	IJPSR	IJPP	JCPR	JPR	RJPB	RJPT	Total	%
1	2009	-	0.013	0	0.021	-	0.005	0.039	1.42
2	2010	0.010	0.065	0.014	0.051	0.014	0.010	0.164	5.96
3	2011	0.062	0.328	0.444	0.056	0.021	0.010	0.921	33.45
4	2012	0.046	0.343	0.032	0.044	0.037	0.014	0.516	18.74
5	2013	0.039	0.368	0.222	0.086	0.034	0.023	0.772	28.04
6	2014	0.031	0.074	0.003	0.067	0.021	0.014	0.210	7.63
7	2015	0.010	0.035	0.002	0.077	0.007	0	0.131	4.76
	Total	0.198	1.226	0.717	0.402	0.134	0.076	2.753	100
	%	7.19	44.54	26.04	14.60	4.87	2.76	100	

Table 4 indicates Journals Citations index of the Pharmacy Journals which are indexed in Indian Citation Index for the period of 2009 to 2015. Among the 6 Journals the highest JCI % value is International Journal

of Pharmacy and Pharmaceutical Sciences 44.54% followed by Journal of Chemical and pharmaceutical Research with 26.04% JCI value.

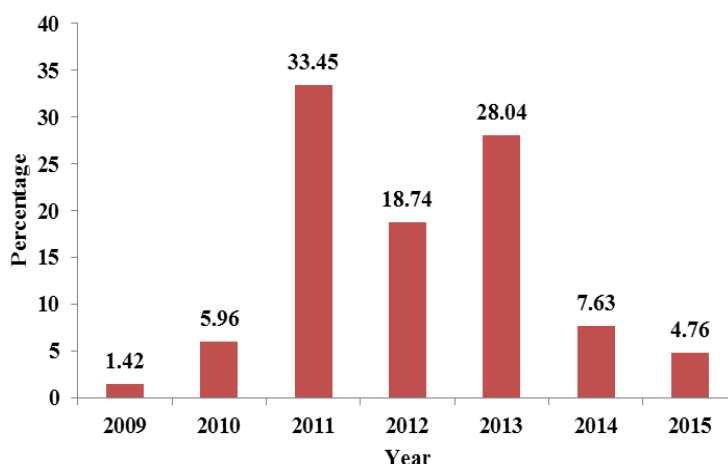


Figure 4. Distribution of Pharmacy Journals JCI

Distribution of Pharmacy Journals Research Impact Indicator (RII)

Table 5. Distribution of Pharmacy Journals Research Impact Indicator (RII)

S. No.	Year	IJPSR	IJPP	JCPR	JPR	RJPB	RJPT	Total	%
1	2009	-	-	-	-	-	-	-	-
2	2010	-	-	-	-	-	-	-	-
3	2011	-	1.039	0.797	0.262	-	0.082	2.180	25.83
4	2012	0.403	1.463	0.952	0.214	0.206	0.031	3.269	38.73
5	2013	0.154	0.696	0.557	0.133	0.119	0.085	1.744	20.66
6	2014	0.128	0.357	0.500	0.091	0.081	0.091	1.248	14.78
7	2015	-	-	-	-	-	-	-	-
	Total	0.685	3.555	2.806	0.700	0.406	0.289	8.441	100
	%	8.12	42.12	33.24	8.29	4.81	3.42	100	

Table 5 shows the RII of the Pharmacy Journals which are indexed in Indian Citation Index. Among the 6 Journals, International Journal of Pharmacy and

Pharmaceutical Sciences journal have 3.555 (42.12%) RII and it is the highest when comparing to other Pharmacy Journals in ICI.

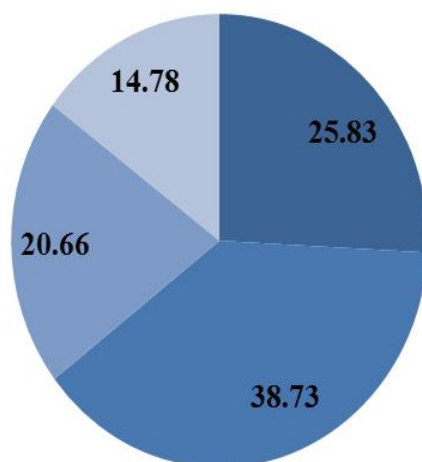


Figure 5. Distribution of Pharmacy Journals Research Impact Indicator (RII)

Journals Uncited %

Table 6. Journals Uncited %

S. No.	Journal Title	Uncited %
1	International Journal of Pharmaceutical Sciences Review and Research	83.20
2	International Journal of Pharmacy and Pharmaceutical sciences	62.17
3	Journal of Chemical and pharmaceutical Research	83.76
4	Journal of pharmacy Research	71.34
5	Research Journal of Pharmaceutical, Biological, and chemical sciences	89.37
6	Research Journal of Pharmacy and Technology	90.51

Table 6 shows the uncited % of the Pharmacy Journals during the period of study. Research Journal of Pharmacy and Technology Journal's uncited % is 90.51%

followed by Research Journal of Pharmaceutical, Biological, and Chemical Sciences with 89.37%.

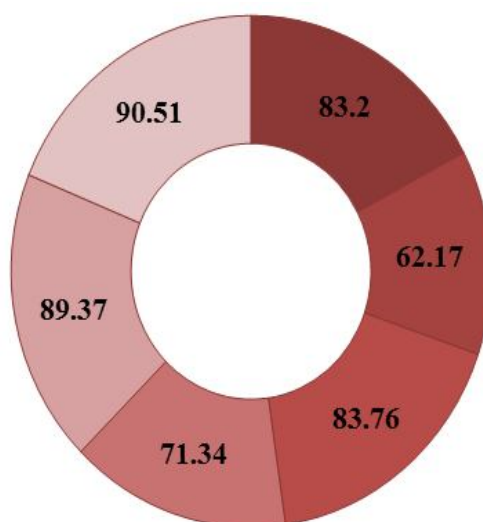


Figure 6. Journals Uncited %

Conclusion

The quality of research and quantity of research is made available through indexing Journals with citations of various articles. There is lacking, for providing citations to other articles which authors cite. For reviewing the previous articles are very much important for supporting your article value added point for publishing. From this study, it shows that very few Journals are citing and cited properly and indexed with ICI. It is a good practice to give self-citation for their previous works and it is follow up of the previous one and improved one. During the period of study there are 26249 articles published from 6 Pharmacy Journals. The Journal of Chemical and Pharmaceutical Research occupies first position with 7191 (27.40%) articles followed by International Journal of Pharmacy and Pharmaceutical with 5416 (20.63%) articles.

The study shows that the frequency of the Journals is varying and that is one of the reasons for the strength of articles. Among the 6 Pharmacy Journals 13120 citations were made, International Journal of Pharmacy

and Pharmaceutical Sciences Journal occupy the first position with 5855 (44.63%) citations and Journal of Chemical and Pharmaceutical Research is in the second position with 3093 (23.57%) citations for the research period. During the study period 6494 self-citations were identified, International Journal of Pharmacy and Pharmaceutical Sciences Journal occupy the first position with 3837 (59.09%) self-citations and Journal of Chemical and Pharmaceutical Research is in the second position 1810 (27.87%) self-citations.

Among the 6 Journals the highest JCI % value is International Journal of Pharmacy and Pharmaceutical Sciences 44.54% followed by Journal of Chemical and Pharmaceutical Research with 26.04%. International Journal of Pharmacy and Pharmaceutical Sciences Journal have the highest RII value. Research Journal of Pharmacy and Technology Journal's uncited% is 90.51% followed by Research Journal of Pharmaceutical, Biological, and Chemical Sciences with 89.37%.

Conflict of Interest: None

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