

Application of Citations for Journal Evaluation in Medical Sciences

Prof. M. Veerabasavaiah

Professor

Department of Library and Information Science
Bangalore University
JB Campus, Bangalore -56.
e-mil: vrbasavaiah@gmail.com

Prakasha S N

Research Scholar,

Department of Library and Information Science
Bangalore University
JB Campus, Bangalore -56.
e-Email: prakash.sn17@gmail.com

***Abstract** - A total of 5359 citations are noticed in Indian Journal of Sleep Medicine during the period from 2006-2015. The study reveals based on the objectives of year, volume wise article and citations distribution in each volume and their percentage, types of literature cited by medical professionals, Ranking of periodicals and country of journals publication.*

Keywords: Periodicals, Indian Journal of Sleep Medicine, Rank of Periodicals, Medical Professionals,

1. Introduction

In 21st century the Information is available in various forms. Among them, the learned periodicals occupy top position and they are intended to be the medium of publication of research papers on theory and practice of every discipline. In Research and Academic libraries the periodicals are the back bone of the collection. They are published reports of the latest research findings. The researchers are mainly depending on journals. Due to low budget allocation and high cost of journals, it is not possible for librarians to procure each and every document. There for the present study helps for both librarians and researchers to select periodical literature according to their use and needs.

There are number of this kinds of studies were carried out by many LIS professionals based on periodicals among them Gross and Gross (5) for the first time used citation analysis is a tool for identifying the core periodicals in subject based on counting of the citations at the end of each articles from a group of primary journals. Dhavan and Yadav (1), Fang (2), Garfield (3,4), Naidu (6), Moed (7), Mohinder Singh (8), Paul Mohan Ray (9), Sittig and Kalasa (10) and Viswanathan (11)

1.1 About Source journal

Indian Journal of Sleep Medicine is an online Open Access journal approved by UGC and published by Indian Sleep Disorders Association (ISDA). It is published once in quarterly. It covers research in articles on medical disciplines of Internal medicine, pulmonary medicine, Neurology, Psychiatry, Paediatric and ENT etc. Indian citations index cited its articles and published abstracts.

2. Objectives of the study

The present study is mainly focus on the following objectives...

- To find out the Year & Volume wise distribution of Research Articles and its Cumulative citations
- To find out the types of Literature cited by Researchers
- To study of the Ranking of core periodicals
- To find out the Country wise distribution of journal citations.

3. Scope and Methodology

Ten volumes were selected from the sources journal of Indian Journal of Sleep Medicine containing 39 issues. Each article reference were collected and analysed by using MS Excel spread sheet. The tables and Graphs have been generated in accordance to objectives of the study.

4. Need for the Study

Due to the information explosion, the librarians are facing problems for procurement of periodicals due to the allotment of limited budget by the authorities. These researchers are mainly depending on primary periodicals because it covers latest and current information. In this context periodicals are essential tool for researchers. Hence there is need for the study.

5. Data Analysis

A total of 5359 citations were analysed according to the following table headings:

Table 1. Year, volume wise Research articles and distribution of citations

Year of publication	Vol. no	Issue no	No. of articles	%	No. of Cumulative citations	%
2006	1	4	45	20.08	822	15.33
2007	2	4	22	9.83	482	8.99
2008	3	4	14	6.25	490	9.15
2009	4	4	21	9.38	614	11.46
2010	5	4	17	7.58	338	6.30
2011	6	4	22	9.83	378	7.06
2012	7	4	23	10.26	418	7.79
2013	8	4	21	9.38	546	10.19
2014	9	3	18	8.03	475	8.87
2015	10	4	21	9.38	796	14.86
Total		39	224	100	5359	100.00

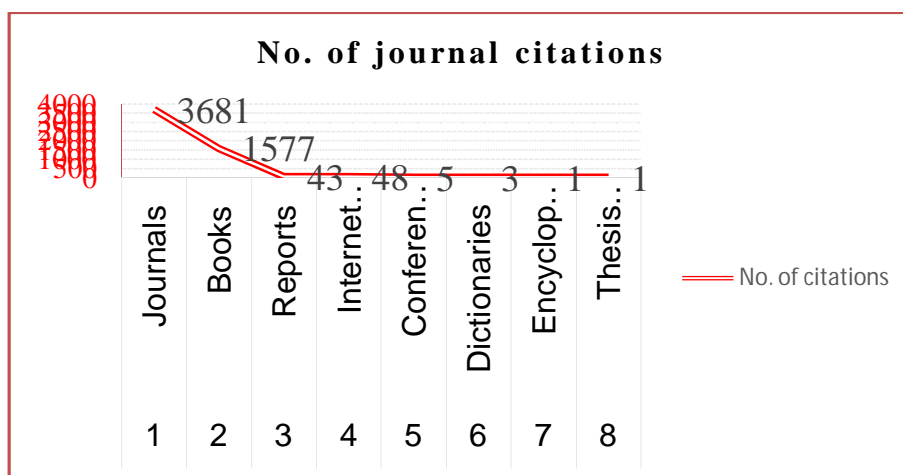
Table 1 indicates that Year, volume wise articles and distribution of citations. A total of 224 articles and 5359 citations are identified.

Table 2. Types of Literature cited by Researchers

Sl no.	Types of Literature	No. of citations	%
1	Journals	3681	68.68
2	Books	1577	29.43
3	Reports	43	0.81
4	Internet Sources	48	0.91

5	Conference proceedings/ Seminar/Workshop/symposia/ Annual Meeting.	05	0.09
6	Dictionaries	03	0.06
7	Encyclopaedia	01	0.01
8	Thesis and dissertation	01	0.01
	Total	5359	100.00

Table 2 depicts the types of literature cited by researchers. There are 3681(68.68%) cited by researchers. Followed by Books with 1577(29.43%), 43(0.81%) Reports, Internet Sources 48(0.91%), Conference proceedings with 05(0.09%), 03(0.06%) dictionaries. Both Encyclopaedias and thesis/ dissertation cited one time.



Graph. 1

Table 3. Ranking of core periodicals

A total of 436 periodicals were ranked based on the cited by researchers. Out of which only 40 periodicals ranked are presented in this table.

S1 no.	Ranking no.	Title of Journals	No. of citations	%	Country
1	1	Sleep (journal)	819	22.24	USA
2	2	Am j Respiratory Care Med	182	4.94	USA
3	3	The American Journal of Physiology	180	4.88	USA
4	3	Chest	180	4.88	USA
5	4	Paediatrics	172	4.67	USA
6	5	Sleep Med	165	4.49	USA
7	6	J Clinical SleepMed	155	4.31	USA
8	7	Psychiatry Journal	154	4.18	USA
9	8	Arch Intern Med	139	3.77	USA
10	9	Indian J Sleep Med	137	3.72	India
11	10	Thorax	130	3.54	UK
12	11	N. Engl. J. Med.	123	3.35	USA
13	12	New Jersey Med	114	3.09	USA
14	12	AJRCCM	114	3.09	USA
15	13	Sleep Med Rev	40	1.08	Netherland
16	14	Neurology	34	0.92	USA
17	15	Annals of Internal Medicine	32	0.86	USA

18	16	The American Journal of Cardiology	29	0.78	USA
19	17	The European Respiratory Journal	28	0.76	UK
20	18	Arch otolaryngology head neck surg journal	24	0.66	USA
21	19	Journal of the American Medical Association	20	0.65	UK
22	20	Journal of Clinical Sleep Medicine	17	0.46	USA
23	21	Lancet	16	0.44	UK
24	22	Mayo clin Proc	15	0.40	USA
25	22	Indian Journal of Medical Research	15	0.40	India
26	23	American Review of Respiratory Disease	14	0.38	USA
27	24	Sleep and Breathing	12	0.32	USA
28	25	Laryngoscope	11	0.29	USA
29	26	J Sleep Research	10	0.27	UK
30	27	AJOG	8	0.21	USA
31	28	RespirePhysiology	7	0.19	Netherland
32	29	J Neuroscience	6	0.16	USA
33	30	Pediatric Clinics of North America	4	0.10	USA
34	31	Biol Psychiatry	4	0.10	Netherland
35	31	British Medical J	4	0.10	UK
36	31	COPD: Journal of Chronic Obstructive Pulmonary Disease	4	0.10	USA
37	31	European Respiratory Journal	4	0.10	Switzerland
38	31	International Journal of PediatricOtorhinolaryngology	4	0.10	Netherland
39	31	Pediatric Pulmonology	4	0.10	USA
40	31	American Journal of Orthodontics and DentofacialOrthopedics	4	0.10	USA
41-61		20 journals cited in 3 times	60	1.62	
62-173		112 journals cited in 2 times	224	3.04	
174-436		263 journals cited in 1 times	263	7.14	
Total			3681	100	

The above table 3 a total of presents ranking of core periodicals. Among them sleep (Journal) most cited with 819 (22.24%) citations. Followed by Am j Respire Care Med with 182(4.94%), American Journal of Physiology and Chest with 180(4.88%) each, Paediatrics with 172(4.62%), and Indian Journal of Sleep Medicine 9th place with 137(3.72%) respectively.

Table 4 Country wise distribution of journal citations.

S No	Rank No.	Country name	No of journals.	Percentages %
1	1	USA	27	67.50
2	2	UK	6	15.00
3	3	Netherland	4	10.00
4	4	India	2	5.00
5	5	Switzerland	1	2.50
Total			40	100

It is observed from the above Table 4 that there is highest of 29 (72.5 %) of the cited journals are from USA covering, UK ranks the second foreign countries with 4(10%) citations while more than 4(10%) cited journals are from and Netherland 4 (10%), India 2 (5%) of the cited journals. Switzerland 1 (2.5%) 5th rank country cited by journals articles.

Graph.2

6. Major findings

- It is found in table 1 that the highest 45 (20.08%) research articles are published in 2006, whereas 14 (6.25%) in 2008. The Cumulative highest 822 (15.33%) citations are found in 2006 and least 338 (6.30%) citations are in 2010.
- It is observed in Table 2 that the journals are highly cited with (68.68%) citations and (31.31%) other forms of literature cited by researchers.
- In Table 3 it is found that Sleep (journal) is the 1st rank with highly cited 819 (22.24%) citations and source journal Indian Journal of Sleep Medicine cited with 137 (3.72%) citations with 9th rank position in the ranking list.
- Table 4 it is found that USA is the highest with 27 (67.50%) journals Publication followed by UK with 6 (15%) Netherland with 4 (10%), India with 2 (5%) and Switzerland 1 (2.5%).

7. Conclusion

From the study it can be noticed that medical professionals are mainly depended on journal literature other types of literature. Moreover among the ranking of the journal it can be noticed that USA, UK, Netherland, India, and Switzerland Countries are contributed research publication in the medical discipline. The source journal "Indian journal sleep medicine" occupied 9th rank position in the ranking list.

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