

# Раздел

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УДК 002

#### Open Access in India with Special Reference to Indian Medical Journals

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**Abstract.** In India poor access to national and international journals and poor visibility of research papers are among the major problems of major problems faced by Indian researcher. India is in top 10 publishers of research articles and stands fifth in whole world according to the number of articles published in the year 2018 the year 2018, accessible, from India. By a rough estimate Indian researchers publish 0.17 million articles per year. However, 79 percent of these are not openly accessible. As of April 2018 the Directory of Open Access Journals lists only 212 out of the 20,000 plus journals being published from India. Open Access medical journals publishing in India is gaining momentum. Publishers like Indian Medlar centre, publishing 68 Indian Open Access medical journals. *Medknow Publications*, one of the largest open access publishers of medical content in the world publishes over 370 online high-quality peer-reviewed medical society journals in over 42 medical specialties. IndianJournals.com too indexed 36 Open Access journals out which 5 are dedicated to medical specialties. Despite of all these achievements a lot more is to be done in Open access publication of medical literature in India.

#### Открытый доступ в Индии на примере индийских медицинских журналов

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**Аннотация.** В Индии ограниченный доступ к национальным и международным журналам и плохая «видимость» научных работ являются одними из основных проблем, с которыми сталкивается индийский исследователь. Индия входит в топ-10 издателей научных статей и занимает пятое место в мире по количеству статей, опубликованных в 2018 году. По приблизительной оценке индийские исследователи публикуют 0,17 миллиона статей в год. Однако, 79 процентов из них находятся не в открытом доступе. По состоянию на апрель 2018 года в списке Directory of Open Access Journals (DOAJ) перечислены только 212 из более чем 20 000 журналов, издаваемых в Индии. Публикация медицинских журналов открытого доступа в Индии набирает обороты. Издательства, такие как Indian Medlar centre, публикуют 68 индийских медицинских журналов в открытом доступе. Medknow Publications, один из крупнейших в мире издателей медицинского контента с открытым доступом, публикует более 370 высококачественных рецензируемых журналов медицинского общества в интернете по более чем 42 медицинским специальностям.

В IndianJournals.com также индексируются 36 журналов открытого доступа, из которых 5 посвящены медицинским специальностям. Несмотря на все эти достижения, еще многое предстоит сделать в Индии в области публикации медицинской литературы в открытом доступе.

**Key words:** open access, open access in India, open access medical journals of India

**Ключевые слова:** открытый доступ, открытый доступ в Индии, индийские медицинские журналы открытого доступа

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## Introduction

In India poor access to national and international journals and poor visibility of research papers are among the major problems of major problems faced by Indian researcher. The rate by which the scholarly literature is increasing it becomes gradually difficult to get access of this vast amount scientific literature. Due to increasing price of academic journals even the big libraries are not able to provide access to this vast amount of literature. Open Access movement which is slowly percolating into the research Publications in India, can be a solution of this problem. However due to false apprehensions the researchers in developing countries including India are not adopting open access with enthusiasm.

## Objectives of the study

- To discuss the growing trend towards Open Access journals publishing in India.
- To provide over view of open access in medical journals published in India
- To discuss problems in open access publishing in India.

## Methodology

The study and its finding are based on the review of literature which primary include medical journals published in India, internet browsing for respective websites, institutional websites and directories of open access.

Open Access in this study means free availability of peer reviewed research material online to any user to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers. The only role for copyright in this domain, will give authors the control over the integrity of their work and the right to be properly acknowledged and cited [10], by M S Swaminathan, opted on 14 February 2018 [8], publication [2], in all the subjects [1].

## Observations

### Open access in India

The open access movement started in India with two workshops organized by M S Swaminathan Research Foundation, Chennai in May

2004 followed by Delhi declaration on open access adopted on 14 February 2018 [8]. Even after this the open access scenario in India is not bright [6,7,12].

Nature index for top 10 Asia-Pacific countries in science on the basis of fractional count

which is assigned to Institutions based on contribution of their affiliated authors to articles in 82 journals track by nature index, database has put India at fifth place in research articles publication [2].

Table 1

### Top 10 Asia-Pacific countries in science

Name of the country	Actual count	Fractional count
China	15,385	11321.17
Japan	4687	2977.85
South Korea	2137	1318.83
Australia	2736	1241.3
India	1421	949.04
Singapore	1164	594.81
Taiwan	830	371.88
New Zealand	390	123.51
Thailand	195	40.18
Vietnam	81	17.49

*Adapted from the information gathered from <https://www.natureindex.com> [2]*

According to Scimago journal and country rank, India was among top 10 publishers of research articles and ranked 5th during 2018, in whole world ranking after publishing more than 0.17 million research articles in all the subjects [1].

But the sad fact is that most of these are not available in OpenAccess. As per the Scimago Journal & Country Rank, though number of published articles in all subjects is constantly increasing but percentage of articles available in Open access was increasing very slowly. In recent years this trend started falling, which is a very sad state of affairs [1].

Council of Scientific & Industrial Research (CSIR) from the year 2009 made it man-

datory that its grantees will provide open access to funded research [11]. Department of Biotechnology and Department of Science and Technology under the Ministry of Science and Technology had announced jointly the Open Access Policy on 12th December 2014.

### Open Access medical journals publishing in India

India is very active in medical research and its publication. As per Scimago journal and country rank, India stood 10<sup>th</sup> in top ten countries in publishing medical articles by publishing more than 34 thousand scholarly medical articles [1]. Being a developing country, it is a great feat to achieve.

Table 2

**Top ten countries, published maximum number of articles in all subjects, worldwide in 2018**

Rank	Country	Number of research documents published
1	United States	683003
2	China	599386
3	U K	211710
4	Germany	180608
5	India	171356
6	Japan	171356
7	France	120908
8	Italy	119405
9	Canada	111561
10	Australia	106228

*Adapted from <https://www.scimagojr.com/countryrank.php?year=2018> [1] a very sad state of affairs [1], y medical articles [1], country=in [1], to funded research [11]=2018 [1]*

Table 3

**Percentage of Open Access articles published in India in all subjects (2010-2018)**

Year	Total no of Article published	In open access	% in open access
2010	80,802	19,613	24.27
2011	98,238	24,454	24.89
2012	108,751	29,211	26.86
2013	117,127	31,980	27.30
2014	132,805	38,032	28.64
2015	140,499	40,463	28.08
2016	152,760	44,229	28.95
2017	154,619	35,618	23.04
2018	171,356	36,697	21.42

Adapted from information obtained from  
<https://www.scimagojr.com/countrysearch.php?country=in> [1]

Table 4

**Open Access repositories in India**

Institute	Web address
Council of Scientific & Industrial Research (CSIR)	Web address of the funded institute
National Digital Library of India	<a href="http://www.dli.ernet.in">http://www.dli.ernet.in</a>
Indian Academy of Sciences	<a href="http://www.ias.ac.in">http://www.ias.ac.in</a>
Indian National Science Academy	<a href="http://insa.ac.in">http://insa.ac.in</a>
Vidyanidhi	<a href="http://www.vidyanidhi.org.in">http://www.vidyanidhi.org.in</a>
National Academy of Science	<a href="http://www.nasi.nic.in">www.nasi.nic.in</a>
Indian Council for Medical Research (ICMR)	<a href="http://www.icmr.nic.in">http://www.icmr.nic.in</a>
CSIR- NISCAIR, India	<a href="http://nopr.niscair.res.in">http://nopr.niscair.res.in</a>
Indian Institute of Science	<a href="http://eprints.isc.ernet.in">http://eprints.isc.ernet.in</a>

Table 5

**Top ten countries, published maximum number of articles in medicine, worldwide in 2018**

Rank	Country	Number of research documents published
1	USA	249,280
2	China	118,206
3	U K	70,457
4	Germany	55,586
5	Japan	45,641
6	Italy	42,477
7	Canada	40,853
8	France	37,843
9	Australia	37,183
10	India	34,211

*Adapted from <https://www.scimagojr.com/countryrank.php?area=2700&year=2018> [1]*

In India Open Access is more prevalent in medical subjects. But this too is following the pattern of open access in India [5]. Initially there was a slow but sustained rise of openly accessible medical articles. From the year 2013 more than half of the published medical articles in India were openly accessible. But from

the year 2016 the researchers have started closing their windows. A rapid and steady fall is observed in openly accessible articles and in last year only 38 percent of published medical articles were available under Open Access [1]. This can have serious consequence on Open Access movement in India.

Table 6

**Percentage of Open Access articles published in India in medical subjects (2010-2018)**

year	Total no of Article published	In open access	% in open access
2010	19,450	8,069	41.49
2011	23,006	10,331	44.91
2012	26,314	12,299	46.74
2013	28,230	14,299	50.65
2014	30,554	15,833	51.82
2015	30,574	15,854	51.85
2016	32,413	16,187	49.94
2017	32,653	14,459	44.28
2018	34,211	12,960	37.88

Adapted from <https://www.scimagojr.com/countryrank.php?area=2700&year=2018> [1]

Table 7

Subject	No of journals
Medicine and allied subjects	20
Chest diseases	03
Psychiatry	04
Dental sciences	05
Community Medicine	03
Pediatrics	02
Anesthesia	02
Surgery and allied branches	04
Forensic Medicine and toxicology	02
Gynecology & Family welfare	04
Cancer	02
Occupational therapy	03
Pathology and Bacteriology	04
Miscellaneous	10

Adapted from the information gathered from <http://medind.nic.in> [9]

Table 8

**Medical journals published by Wolters Kluwer Medknow India Publications Private Ltd.**

Medical specialties	Number of journals (n=370)
Medicine and allied branches	64
Surgery and allied branches	43
Dental science and allied branches	40
Community health	20
Pharmacology	20
Radiology and Imaging	10
Anesthesia	10
Psychiatry	10
Pediatrics and allied branches	09
Pathology and Bacteriology	09
Nursing and Midwifery	02
Miscellaneous	133

*Adapted from the information gathered from*

<http://www.medknow.com> [13], specialties [14], Access (n=5) [14], com [14]

**Indian Medlars Centre (medIND)**

From 1986 to 31st March 2009, National Informatics Centre and Indian Council of Medical Research had collaborated to setup IC-MR-NIC Centre for Biomedical Information. The Centre, known as Indian Medlars Centre, provided information support services to medical research community. Its portal "MedIND" provides free full text access to 68 Indian medical journals. Out of which half are for medicine and allied specialties (n=34) [9].

**Medknow Publications**

Medknow Publications Private Limited also known as *Wolters Kluwer Medknow*, was

founded in 1997 in Mumbai by Dev Kumar Sahu. Out of 489 scholarly journals it publishes, over 370 (around 75 percent) are online high-quality peer-reviewed medical society journals in over 42 medical specialties. It is one of the largest open access publishers of medical content in the world. It mainly operates on the 'Platinum' model of open access publishing. Metadata harvesters, search engines and indexing services index and harvest metadata of the current issues of the journals from the individual journal websites. These medical society journals cover almost all specialties of medical science with highest number its journals (20 percent) committed to medicine and allied branches [13].

### Bioinfo Publications

Bioinfo Publications was a rapidly growing academic publisher from Maharashtra with more than 70 Open Access and more than 70 subscription based Peer Reviewed journals covering a wide range of academic disciplines. There were 20 Peer Reviewed journals in medical science. But it is a history now. Most of these journals stopped their publications and at present not accepting article submission. Now they are publishing only 5 journals which include one medical journal “International Journal of Medical and Clinical Research”

published on Open Access model on half yearly frequency. (<https://bioinfopublication.org>)

### IndianJournals.com

It provides single window access to multidisciplinary Indian journals published by different scholarly societies and institutions. It publishes 332 journals in different science subjects out of which only 36 (around 11 percent) are open access journals. These open access scholarly journals belong to many specialties of science out of which 5 journals are dedicated to medical subspecialties [14].

Table 9

#### Journals hosted on Indian Journals.com (n=332)

Category	Number of journals
Total journals published	332
Total journals published on medical specialties	94
Medical Sciences	62
Pharmacology	10
Nursing	14
Dental Sciences	08
Total journals published In Open Access	36
Total medical journals published In Open Access	05

*Adapted from the information gathered from  
<http://www.indianjournals.com> [14]*

#### IndianJournals.com-Medical Journal in Open Access (n=5) [14]

- Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology
- Indian Journal of Applied Basic Medical Sciences
- Indian Journal of Health Sciences and Care
- International Journal of Medical Research & Health Sciences
- Open Journal of Psychiatry & Allied Sciences

*Adapted from the information gathered from  
<http://www.indianjournals.com> [14]*

Table 10

**Indian medical science journals available in full text on internet [4]**

SN	Name of the Journal	Web address
01	Indian Journal of Basic and Applied Medical Research (IJBAMR)	<a href="http://ijbamr.com/home.htm">http://ijbamr.com/home.htm</a>
02	Scholars Journal of Applied Medical Sciences	<a href="http://saspublisher.com/sjams">http://saspublisher.com/sjams</a>
03	International Journal of Medical and Health Sciences	<a href="http://www.ijmhs.net/index.php">http://www.ijmhs.net/index.php</a>
04	The National Medical Journal of India	<a href="http://www.nmji.in/index.asp">http://www.nmji.in/index.asp</a>
05	International Journal of Medical Research & Review (IJMRR)	<a href="http://www.ijmrr.in/Default.aspx?pageid=1">http://www.ijmrr.in/Default.aspx?pageid=1</a>
06	International Journal of Medical Science Research and Practice (IJMSRP)	<a href="http://www.ijmsrp.com">http://www.ijmsrp.com</a>
07	Medical Journal Armed Forces, India	<a href="http://www.mjafi.net">http://www.mjafi.net</a>
08	Indian Journal of Clinical Medicine	<a href="http://www.la-press.com/journal-indian-journal-of-clinical-medicine-journal">http://www.la-press.com/journal-indian-journal-of-clinical-medicine-journal</a>
09	Indian Journal of Medical Case Reports	<a href="http://www.cibtech.org/jcr.htm">http://www.cibtech.org/jcr.htm</a>
10	Academic Medical Journal of India (AMJI)	<a href="http://medicaljournal.in">http://medicaljournal.in</a>
11	International Journal of Biological & Medical Research (IJBMR)	<a href="http://www.biomedscidirect.com/aboutjournal.php">http://www.biomedscidirect.com/aboutjournal.php</a>
12	Indian Journal of Medical Ethics	<a href="http://www.issuesinmedicalethics.org/index.php/ijme/index">http://www.issuesinmedicalethics.org/index.php/ijme/index</a>
13	International Journal of Medical Research & Health Sciences	<a href="http://www.ijhsr.org/index.htm">http://www.ijhsr.org/index.htm</a>
14	International Journal of Medical Science and Public Health	<a href="http://www.ijmsph.com/">http://www.ijmsph.com/</a>
15	Asian Journal of Medical Research	<a href="http://www.scopemed.org">http://www.scopemed.org</a>
16	The Journal of Research in Medical and Dental Science (JRMDS)	<a href="http://www.jrmds.in/index.php">www.jrmds.in/index.php</a>
17	Indian Pediatrics	<a href="http://www.indianpediatrics.net/index.htm">http://www.indianpediatrics.net/index.htm</a>

**Kamla Raj Enterprises**

This open access Publishing house of Gurugram, Haryana, publishes 23 Open Access Journals in various disciplines of science. None of these is directly related to medical special-

ties. However three of these are distantly related to life sciences [4], journals [15], com) [15].

**Discussion**

Medicine is a subject, directly related to the lives of common men. Any development in

this field may help to save thousands of lives. So research findings of this field should be available to general researcher well as to a common man as early as possible. Despite of being listed in top 10 scientific material publishing nations, the scenario of open access publishing in India is not so bright. Indian research community publishes about 0.17 million articles per year. Out of these only 21 percent of the articles are openly accessible to all. Out of more than 34 thousand medical articles are published in India, out of which only 38 percent are Open Access. Bioinfo publication of India has stopped publishing its 70 Open Access journals. This is a setback to Indian research community and Open Access movement in India.

However ministry of Science and Technology and Department of Biotechnology have jointly announced their open access policy on 12th December 2014. CSIR has also made it mandatory for all his funded research projects to publish their findings on access model.

### **Why these efforts are not producing desirable result?**

What constraints the Open Access movement is facing in India? The scientific community in India probably has been resisting to embrace Open Access mainly because of costs, reputation, and fears of plagiarism.

**Cost:** It is a somewhat valid point. The publishing on Open Access Journals involves a cost. This usually comes from author as article processing charge. However most of the research projects in India are funded by government or some organization. So every grant should have a provision and separate fund for this.

**Reputation:** Many researchers have a false notion that Open Access Journals are not good. Their readership and citation and impact factor is low. It is no longer a valid argument. Many well-known journals like Elsevier now offer sev-

eral Open Access journals. Look at this list of medical journals [15].

- The New England Journal of Medicine (impact factor: 79.258)
- Lancet (London, England) (impact factor: 53.254)
- JAMA – Journal of the American Medical Association (impact factor: 47.661)
- The New England Journal of Medicine (impact factor: 70.670)
- Lancet (London, England) (impact factor: 59.102)
- Nature Reviews Cancer (impact factor: 51.848)
- JAMA – Journal of the American Medical Association (impact factor: 51.273)
- Nature Reviews Immunology (impact factor: 44.019)
- Nature Reviews Genetics (impact factor: 43.704)
- The Lancet. Oncology (impact factor: 35.386)

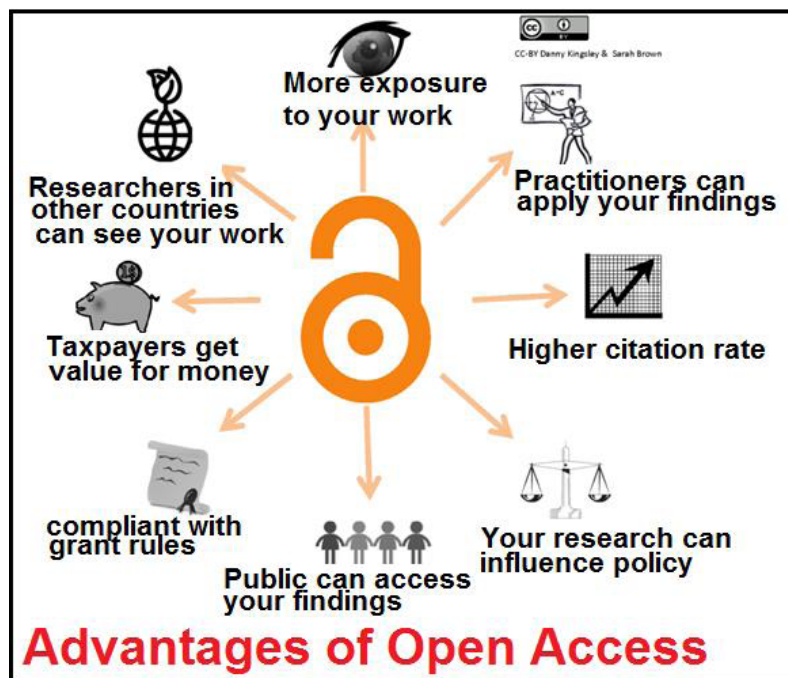
(Source <http://www.freemedicaljournals.com>) [15]

**Plagiarism:** Again it is an invalid argument. By making research results and knowledge accessible and available and thus under everyone's eye, attempts to copy and misappropriation somebody else's work will become even more obvious and visible rather than the other way round.

All in all it seems therefore that these fears are not grounded while the benefits are enormous. Few of them are given below.

- Researches in other countries can see your work so there will be more exposure to your work. So citation rate your work increases.
- Sometimes it is mandatory for you.
- Others can apply your findings to expend your/ their ideas further.
- Your research can influence policies of your country/world and the taxpayers

### Open Access is advantageous [16]



of your country gets value for their money

#### **Open access is not a courtesy; it is an obligation on the researcher**

All the research projects are funded by governments or some organizations. It's all taxpayer's money, which the researchers are getting as grants. So they have to reciprocate. They have to explain and show what benefit they have procured for the taxpayers. They have to tell what they are doing in the labs. After all its taxpayer's hard earned money they are spending on their research.

#### **Beware! The publisher is devouring the fruit of researcher's labour**

Even in Closed Access publishing of medical journals sometimes author has to pay article processing charge. Along with publication the author also transfer the copyright to the publisher. If it is a subscribed journal, the publisher gets all the revenue generated by the journal. Contrary to this in Open Access the author retain his copyright with multiple options of Creative Commons license.

### Conclusions

Open Access in India is not in a good shape due. A lot more is to be done by researchers, publication houses, funding agencies and government.

Indian researches are hesitating in embracing Open Access on the basis of baseless reasons.

In medical journals the open access publishing is very low. It needs a boost from researchers, funding agencies, and monitory assistance from NGOs, donations and nonprofit organizations.

Open Access in medicine is not a fashion or trend. It is a necessary strategy to ensure that research results turn into true *international public goods* as it is directly related to human lives.

*If you love knowledge, share it!*

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