

Chapter 19: Open Access in India

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In the scholarly publishing scenario, India has its unique position. India does not have a high percentage of its scientific journals available online. Though it is placed at the 12th position for overall number of journals among the top 25 publishing countries, its position falls down to 18th for journals with online content (Haider, 2005). Surprisingly, its position in the list of Open Access (OA) journals is fifth, well ahead of countries such as the Netherlands, China, Germany, Australia, and so on, which are higher in the list of online journals. Among the non-high-income countries, India ranks second only to Brazil for the number of OA journals. Almost 50% (48 out of 103) of the online journals from India are OA (see Haider, 2005). What makes India do so well in the list of OA journals? How are such a large percentage of electronic journals in India able to provide OA without even charging the author or authors' institution for publication of the articles?

On the other hand, in the Registry of Open Access Repositories, India ranks 11th in the list of countries with registered interoperable archives. Unfortunately, out of the 15 listed archives, only 11 were accessible and functional at the time of writing this piece. Eleven of these were institutional archives and only one institutional archive had more than 500 documents. Why does the country with the largest number of information technology professionals fail to build e-archives for their institutions? Why are the existing archives near empty and not filling up?

OA journal publishing in India

A large number of the journals published from India belong to learned societies and associations, and are published by the association or the editor themselves without the involvement of any commercial publisher. The members of these learned societies receive the print copies of the journals without paying an annual or recurring fee. For continuing their publication activities the associations depend on non-member subscriptions, which are limited in number and restricted by and large to the Indian universities and colleges, on advertisements in print editions, and on income generated from other sources such as the annual conferences of the associations. Most of the Indian journals suffer from 'low circulation - low visibility - low impact factor' syndrome. With many fewer paid regional or international subscriptions, these journals have limited visibility, restricted mainly to the members of the association. With this limited visibility, these journals are cited less frequently than their western counterparts. The low impact factor inhibits authors from submitting their quality work to the Indian journals. Thus, it is expected that with OA, Indian journals will be able to reach to a wider audience. At the same time, loss, if any, of paid non-member subscriptions is less likely to have a major effect on the economics of these journals.

A number of biomedical journals have been online from late 1990s; Neurology India, Current Science, Indian Pediatrics, and the Indian Journal of Critical Care Medicine have been online since 1998–99. These individual endeavours have now evolved into more organised and collaborative efforts, including those of the Indian Medlars Centre, the Indian Academy of Sciences, and the Indian National Science Academy under the not-for-profit sector, and

Medknow Publications in the commercial segment. International players such as Bioline International have also helped many Indian journals to have web presence.

Indian Medlars Centre

The Indian Medlars Centre (IMC), set up jointly by the National Informatics Centre and the Indian Council of Medical Research, has taken the pioneering step of putting Indian biomedical journals accessible from a single platform. IMC's first bibliographic database IndMed, established in 1998, provides abstract level information from more than 70 journals. Each of the articles in the database is tagged with Medical Subject Headings. In 2003, IMC launched its full-text database, MedInd, which now hosts full text version of 38 journals in PDF format. The understanding between the journals and the IMC ensures that the digitised work hosted by IMC will continue to be accessible even if the journal discontinues providing newer issues.

Indian Academy of Sciences

The Indian Academy of Sciences (IAS), founded in 1934, publishes 11 journals with the basic philosophy that no journal published by the Academy is in competition with another journal published in the country. Current Science, published by the Current Science Association in collaboration with the IAS, has entire back volumes from 1932 online in PDF format and has been online since 1999. Many other journals including the Journal of Biosciences, Sadhana, and Pramana also have the entire back volumes online.

Indian National Science Academy

The Indian National Science Academy (INSA), established in 1935, publishes four journals including the Proceedings of INSA. Under the project 'Building Digital Resources: Creating Facilities at INSA for hosting S & T Journals on Online', INSA launched the Open Access version of these journals in December 2003.

Bioline International

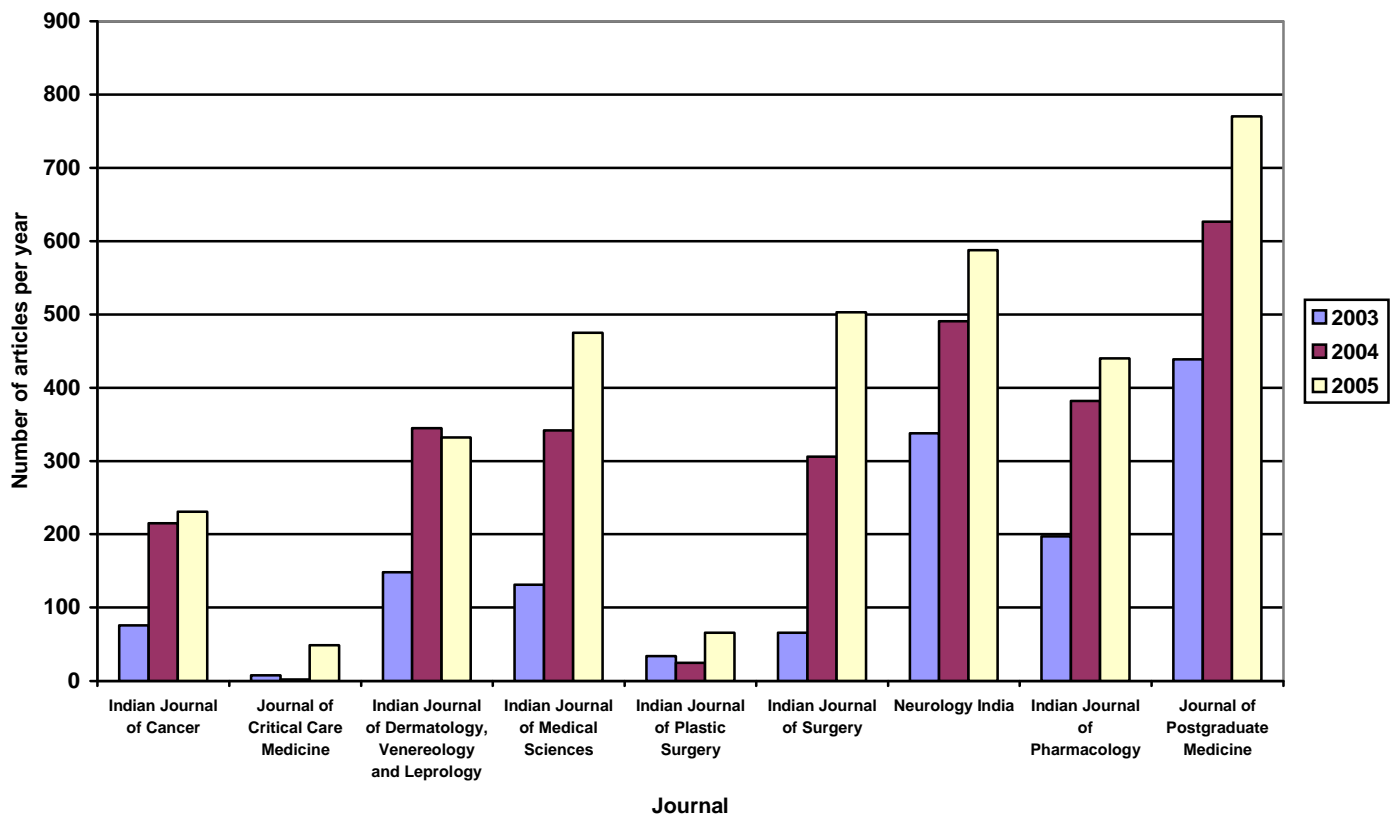
Bioline International is a not-for-profit collaborative effort of the University of Toronto Libraries, Canada, the Reference Center on Environmental Information, Brazil, and Bioline, UK. It provides electronic publishing services to journals published in developing countries. Bioline provides access to 14 Indian journals on their primary site as well as archives these journals at the Bioline EPrints Archive.

Medknow Publications

Medknow Publications is a commercial publisher providing publishing services to over 30 biomedical journals. These journals provide immediate free access and do not charge the author or author's institution for publication of the articles. The journals also permit authors' self-archiving. Most of the journals published are archived at multiple places including interoperable repositories, Bioline International and MedInd, ensuring the long-term archiving and accessibility of the published content.

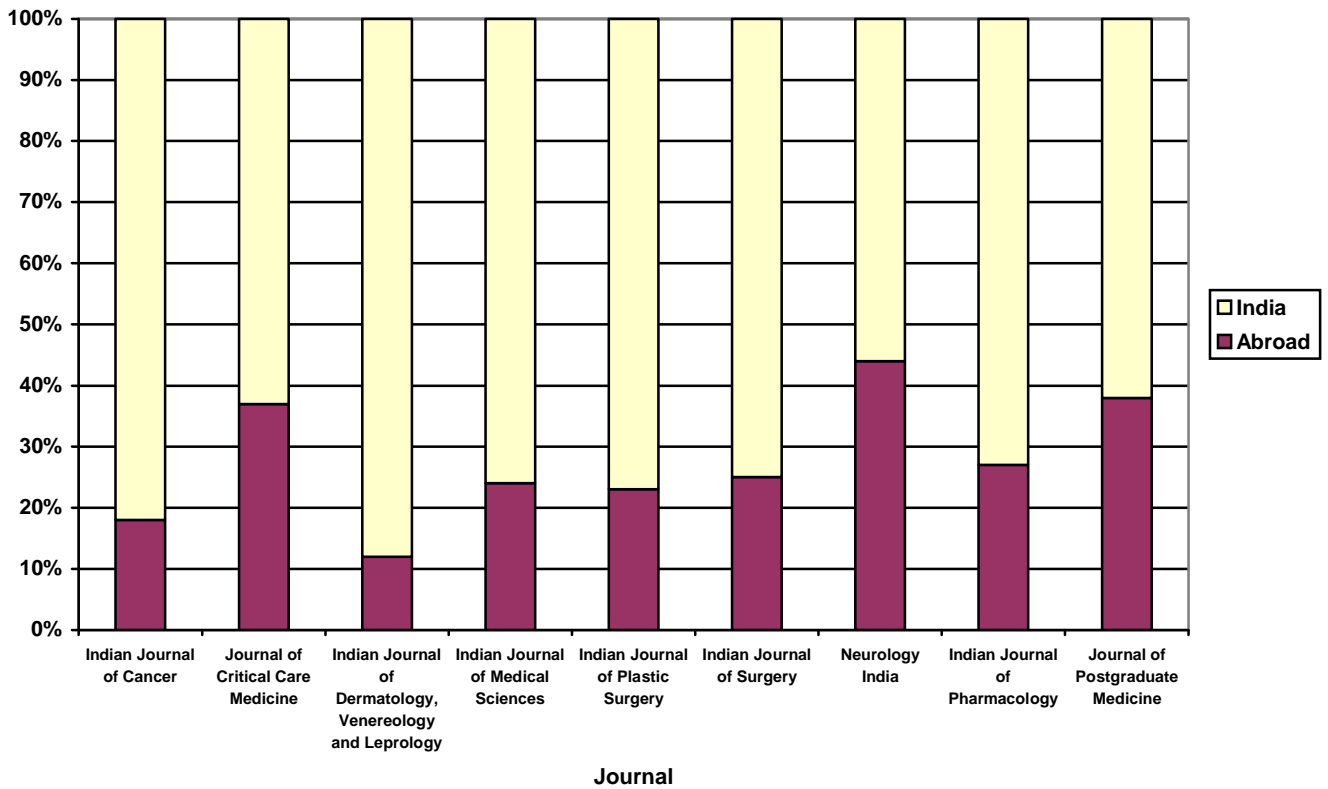
Impact of OA publishing

OA has certainly helped the Indian journals to reach an international audience, as could be seen by the number and distribution of article downloads. The Journal of Postgraduate Medicine, a quarterly journal with a print circulation of less than 1,000, attracts close to 100,000 visitors with more than 110,000 article downloads per month. The increased accessibility and visibility has also increased the citations received by this journal (Bavdekar and Sahu, 2005; Sahu, Gogtay and Bavdekar, 2005). The number of manuscripts submitted to the journals has increased many fold (see Figure 19.1), with increases in the number of articles coming from other countries ranging from 12–44% for various journals (see Figure 19.2).



[Insert Figure 19.1]

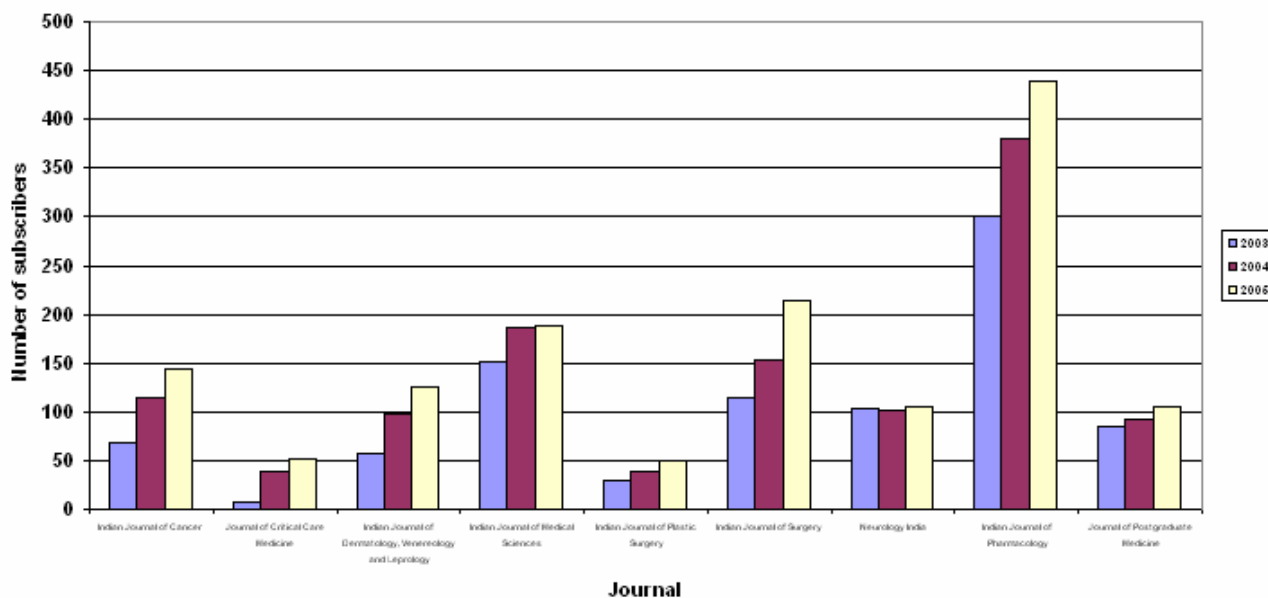
Figure 19.1 - Number of articles submitted per year for select journals published by Medknow Publications, 2003-2005



[Insert Figure 19.2]

Figure 19.2 - Percentage of articles from India and abroad for select journals published by Medknow Publications for the year 2005

Interestingly, these OA journals have not lost the paid non-member subscriptions (see Figure 19.3) but, in fact, have benefited from increased subscriptions, including many international subscriptions (Rajashekar, 2004; Sahu, 2006). As the cost of putting a website is miniscule compared with the cost of sending printed copies free to the hundreds of members, the online publication has not had any impact on the economics of these journals. In addition, helping hands from *MedInd* and *Bioline* have helped these journals to take care of the expenses for the OA version.



[Insert Figure 19.3]

Figure 19.3 - Subscriptions of select journals from Medknow Publications, 2003–2005

OA archiving in India

Scientists have always preferred to publish their work in high-impact journals. Until recently, India had no journal with an impact factor of more than 1.0; consequently, the best science from India is rarely published in the Indian journals. There have been thoughts to mandate publication of government-funded research in the Indian journals and a 'publish in India' movement (John, 2004; Satyanarayana, 2004). In spite of calls for such movements, Indian research work continues to be published in high-impact overseas journals, not all of which are accessible even for the most affluent universities and colleges in India. Thus, OA publishing adopted by the Indian journals will not help the Indian scientists to access the Indian science. The Indian scientists need to make their work published in toll-based journals accessible to others through self-archiving. In last couple of years, a number of institutional and subject-based repositories have been set up in India.

OA repositories in India

The Indian Institute of Science was the first in the country to set up an interoperable institutional repository (ePrints@IISc), under the leadership of the Late Dr. T. B. Rajashekar. The archive now has more than 3,000 documents, with over 90% having full text. The Institute has a separate Archives Unit and well documented submission guidelines. The Archives Unit also helps the staff of the institution to submit papers by email, which are then deposited by the Archives Unit. In spite of these efforts, the repository has less than 5% of the published papers of the Institute. Most of the documents in the archive have been deposited by the Archive Unit and less than 5% of the existing documents are actually self-archived by the authors. Other

institutional repositories in India are less than a year old; many are in the testing phase, and none have more than 500 papers.

What could be the reasons for the dismal performance on this front? We sent a set of 20 questions to the contact persons of 11 institutional repositories in the country, which generated eight responses. The important factors which could have contributed to the non-filling of the repositories could be the lack of an institutional mandate (8 out of 8), no dedicated archive unit (7 out of 8), and an absence of active help for the staff (6 out of 8). Respondents considered motivating the staff to deposit their papers as their biggest challenge.

Efforts to popularise OA archives

Professor Subbiah Arunachalam, the greatest OA advocate in the country, organised a workshop on 'Open Access and Institutional Repositories' under the aegis of the M. S. Swaminathan Research Foundation, Chennai, in May 2004. Forty eight information scientists and decision-makers from various disciplines of science were trained for installing, maintaining, and promoting OA-archives. The majority of the existing repositories in India have been established by the participants of this workshop. A number of training workshops have been conducted by Late Dr. Rajashekar, Dr. A. R. D. Prasad, Dr. M. G. Sreekumar, and others.

A special session on OA was held at the 93rd Indian Science Congress in January 2006, which came up with the following recommendation for the 'Optimal National Open Access Policy'. The Government of India expects authors of research papers resulting from publicly-funded research to maximise the opportunities to make their results available for free. To this end, the Government:

- requires electronic copies of any research paper that has been accepted for publication in a peer-reviewed journal, and is supported in whole or in part by Government funding, to be deposited into an institutional OA repository immediately on acceptance for publication;
- encourages Government Grant Holders to publish in a suitable OA journal where one exists; the Government will cover the publication costs, if any;
- encourages Government Grant Holders to retain ownership of the copyright of published papers, where possible.

Hindrance for promoting and propagating E-archives

We asked the participants of the Chennai workshop the reason(s) for not being able to set up an archive in the 20 months since the workshop. The main reason given for the inability to set up an archive was the lack of the infrastructure. The institutions which have been able to set up an archive already had a dedicated server, the bandwidth or the technical staff; others lacked this technical support. Administrative apathy was the second commonest reason given for not able to start an archive. Those who have already set up archives are finding the inertia amongst the staff of the institution to self-archive.

Other OA projects in India

The Digital Library of India aims to include a free-to-read, searchable collection of one million books, predominantly in Indian languages. The project is hosted by the Indian Institute of Science, Carnegie Mellon University, and ERNET, and has already completed the digitisation of more than 50,000 books.

Vidyanidhi, an initiative of the University of Mysore, is an archive of doctoral theses. It also maintains the archive using DSpace.

The project SJPI (Scientific Journal Publishing in India) aims to improve the accessibility of scientific literature published in Indian journals by introducing an indexing system.

Open J-Gate, being launched soon, will provide a search across over 2,500 OA journals and link to the full text articles.

Richard Smith, the editor of the BMJ, has said, "If researchers do not publish their research then they distort the research record, potentially leading astray those who undertake the important work of systematically reviewing evidence" (Smith, 2002). A research paper published in an obscure, inaccessible or toll-based journal and not archived for the rest of the world to use it, is as good as not published. Indian journals often get neglected in international meta-analyses and Indian papers published in international journals are inaccessible for the Indian authors doing research. The combined 'green' and 'gold' roads to OA could help break this jinx.

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