



Being Relevant and Surviving the Onslaught of an Information Technology Era

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ABSTRACT

The present day process of scholarly communication relies heavily on books, monographs, conference proceedings, and most importantly on academic journals. Publishing in peer-reviewed academic journals offers a tremendous prospect for those who wish to share and communicate new original ideas, knowledge and the results of research to their professional communities. It is the responsibility of the editorial and publication teams to promote a wider readership and create awareness of the scope of the journal. The Annals of Dentistry of the University of Malaya (ADUM) has been the official publication of the Faculty of Dentistry, University of Malaya since 1994. The primary objective of ADUM was to offer a platform for the dissemination of research findings of its academic staff. To date, this peer-reviewed journal has published 20 issues comprising invited editorial, original research, interesting and challenging case reports and scientific literature reviews. With the vision for the University to become a World Class Research University and the emphasis of its faculty members to undertake high quality research and publish in high impact scholarly international journals for promotion.

INTRODUCTION

Scholarly communication relies heavily on books, monographs, conference proceedings, and most importantly, academic journals (1). An academic journal holds together and engages a community that shares a common interest. Publishing in the academic journal offers a significant viewpoint for those who wish to share and communicate new original ideas, knowledge and the results of research within their professional community. It is the responsibility of the editorial and publication teams to promote a wider readership and create awareness of the scope of the journal. They also need to work to protect and strengthen the integrity and quality of the journal and its processes (2).

The Annals of Dentistry of the University of Malaya (ADUM) has been the official publication of the Faculty of Dentistry, University of Malaya since 1994. It only one among the two journals in the field

of dentistry published in Malaysia that has been in existence for more than twenty years. The primary objective of ADUM is to offer a platform for the dissemination of research findings of its academic staff but over the years, it has gained interest from among the local universities and the Ministry of Health fraternity and to a smaller extent from regional and international research community. The longevity of this journal indicates that researchers recognize this journal as an important channel to communicate their research activities and findings.

To date, this peer-reviewed journal has 20 volumes published, with contents comprising of invited editorial, original research, interesting and challenging case reports and scientific literature reviews. With the vision for the University to become a World Class Research University and the emphasis of faculty members to undertake high quality research and publish in high impact scholarly international journals for promotion and tenure, lately submissions

had become fewer and it had become a challenge to maintain the journal.

It was estimated that between 6000 to 7000 scientific articles are written every day and it was reported that the traditional review process for just one journal was estimated to cost about \$1 million a year (3). In 2004, the *Journal of Biological Chemistry* published 6500 articles, whereas articles from the *Proceedings of the National Academy of Sciences* were cited more than 300 000 times (4). With such statistics from around the world, the authors would like to look at the relevance of the existence and opportunities for survival of ADUM in this current information technology era. The authors compiled and categorized the type of all articles published and assessed its current relevance. The findings have been discussed in four areas, namely "Content", "Publicity", "Indexing" and "Access". Measures aimed at sustaining the journal have also been suggested.

CONTENT

ADUM is a peer reviewed journal that covers all areas of dental research, education and clinical practices. It had been publishing on an average 9 manuscripts in every volume with a minimum of 5 to a maximum of 16 in each publication. Until its 18th volume, there was only one issue every year, but this was increased to 2 issues in a year from 2012. Over the years, the majority of primary authors have been academicians from the faculty mainly due to the fact that the submission and peer review process were being handled manually. This number of publication in ADUM does not reflect accurately the high quality research being conducted and published in the area of research, education and practice at the faculty as shown in Table 1; this is due to the fact that the majority of high impact publications are published in indexed and tiered international journals due to pressure for promotion and tenure.

Over the span of 20 volumes, ADUM has published 180 original manuscripts. A majority of the primary authors are affiliated to the faculty (84%), being academics or postgraduates at the Faculty of Dentistry, University of Malaya (Table 2). There were 6 primary authors from India and other dental institutions in Malaysia respectively, 3 from the United Kingdom and 2 from Australia. A third of the authors are affiliated to the Oral Medicine and Oral Pathology while the other major contributors include the departments of Restorative Department and Community Dentistry (Figure 1). The majority of the manuscripts have 2 to 4 authors (Table 2).

Table 1: Total number of publication from faculty members

Year	Total publication	ADUM
1994	NR	5
1995	NR	11
1996	NR	14
1997	NR	10
1998	NR	12
1999	NR	16
2000	47	11
2001	26	12
2002	37	6
2003	47	8
2004	43	8
2005	83	7
2006	54	6
2007	49	9
2008	38	8
2009	64	6
2010	90	7
2011	120	5
2012	179	10*
2013	181	9*

NR – No record; * two issues in a year

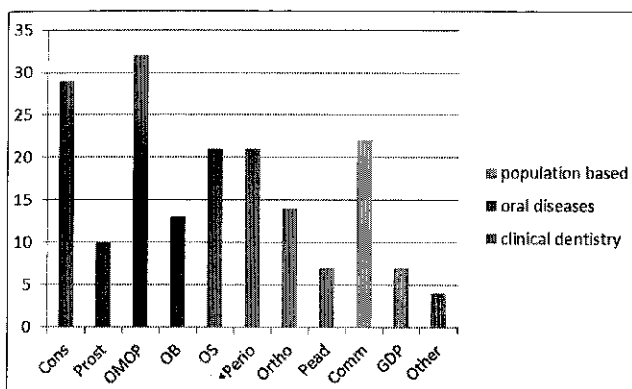
Table 2 : Information regarding authors

	n	%
First author affiliation		
Faculty	151	83.9
Within the country	11	6.1
International	18	10.0
Total number of authors		
One	39	21.5
2 to 4	128	70.7
5 to 7	14	7.8

In today's enhanced communication era, unless an electronic submission is available and fast tract publication provisions are provided by the editorial office, authors will shy away from submitting their manuscripts to a traditional journal due to cost and time factor implication (5). There is need to encourage the new and fresh academics who have not previously authored, reviewed, or otherwise contributed to any other journal(s) to use ADUM as a platform for them

to hone their writing skills on current dental issues. In addition, as part of the undergraduate curriculum, our students undertake an elective research project under the guidance of the academics. For the past two years they were required to submit their reports in a manuscript format following the ADUM author guidelines and these reports were peer-reviewed as a way of assessing the quality of their work. For this purpose, they were invited to submit their manuscript to the ADUM for real. This was one way by which the editors were able to increase the number of issues in a year.

Figure 1 : Schematic representation of the various specializations of the contributing first author



Cons – Conservative Dentistry; Prost – Prosthodontics; OMOP – Oral Medicine and Oral Pathology; OB – Oral Biology; OS – Oral Surgery; Perio – Periodontia; Ortho – Orthodontia; Pead – Paediatric Dentistry; Comm – Community Dentistry; GDP – Genral Dental Practice

PUBLICITY

Eighty six percent of ADUM's principal authors are affiliated to the Faculty of Dentistry University of Malaya. This suggests that ADUM has not yet been well publicized to all the potential audience and its contributor groups across the publication spectrum outside the faculty. With the increase in the number of dental schools in this country as well as this region and the competitiveness in getting acceptance by reputed journal, the opportunities for well established local journals to attract submissions increases if they can provide a user friendly platform.

In order to achieve this objective, ADUM needs to aggressively seek high-quality manuscripts through personalized contact with potential authors from among junior academics, postgraduates and practitioners from within the university as well as the region. Expanding the authorship and readership is also an effective strategy to increase the "citability" of articles published in this journal (6). This can

be done by having a good and dedicated editorial staff. In addition, the editorial board should be aware of the current "hot" topics, periodically attend research presentations and personally approach lead investigators of interesting research projects for active recruitment of manuscripts. New editorial members and potential authors and reviewers need to be educated on editorial policies, standards of editing, scientific integrity, publication ethics, copyright issues and other relevant issues of concern (7).

Lastly, the journal needs to be marketed aggressively and made available to the scholarly community within the discipline by making its contents widely known when new issues are available, made via e-mails, table-of-contents (TOC) alerts and open electronic access prior to the publication. This can be done by leveraging on the impact of new technology like RSS feeds, social networking, and social bookmarking of sites. However, there are still many institutions in this region that are unable to assess e-journals, therefore hard copies of the journal need to be sent to their libraries as well.

INDEXING

Since 2010, ADUM has been indexed by EMCare Elsevier Bibliographic Databases, Western Pacific Region Index Medicus, MyCITE and Malaysian Abstracting & Indexing System (MyAIS). The editorial board has managed to get ADUM indexed in Google Scholar from its 19th volume. Since then, readers can access not only the abstract but also full text of the articles published in ADUM. In 2013, 66 Malaysian journals were indexed by either SCOPUS and/or Science Citation Index (SCI), of which 13 were medical related journals (8).

To be recognized as an authoritative, high-quality source of information, a journal must be widely available. Indexing and abstracting services facilitate the broadest dissemination of information by pointing researchers to articles that are relevant to the field. Once a journal is launched and has a track record of high quality content, timely publication, adequate reserves and solid content, it is appropriate to contact indexing and abstracting services for consideration. Counting references to rank the use of scientific journals has been reported as early as 1927 by Gross and Gross (9). In 1955, Garfield suggested that reference counting could measure "impact," but the term "impact factor" was not used until the publication of the 1961 SCI in 1963 (10). Impact factor reflects the ability of journals and editors to attract the best papers available (11).

It is the next target of ADUM to be indexed and abstracted by major databases such as Scopus, Science Citation Index as well as Medline. But, to achieve that the publisher needs to register ADUM with CrossRef and then assign a digital object identifier (DOI) for every article that is published and made available electronically. CrossRef is an association of scholarly publishers that develops shared infrastructure to support more effective scholarly communications. Its citation-linking network covers over 72 million journal articles and other content items (books chapters, data, theses, technical reports) from thousands of scholarly and professional publishers around the world. Meanwhile a DOI is a unique alphanumeric string assigned by a registration agency like CrossRef, to identify the intellectual property and provide a persistent link to its location on the Internet.

ACCESS

Currently ADUM is a print publication with electronic full text availability limited to post-publication. In addition to the expense, print publication increases the time for publication, which has a negative effect on the willingness of scholars seeking tenure and promotion to contribute. Moreover, increased time to publication may also affect the relevance of a publication, and therefore negatively affect an article's readership and "citability" potential.

A toll-free, open access publication is a worldwide movement to disseminate scientific and scholarly research literature online, free of charge, and free of unnecessary copyright and licensing restrictions to increase the visibility, accessibility, and impact of research (12). Internet publication has also helped reduce the cost and effort of submission, conducting peer review and publishing through highly automated Web-based management systems. According to Morris (17) in her book *Getting started in electronic journal publishing*, electronic publishing have the following six advantages over print, namely international reach, speed, additional capabilities, lower cost, new publishing opportunities and sustainability.

It used to take about eighteen months for a manual peer-reviewed article to go from submission to publication resulting in the information disseminated through these journals often being regarded as outdated. Today, with the help of Web-based management systems, peer review averages less than 30 days to first decision. Accepted articles can be published online ahead of print after proofs are copyedited and reviewed by authors. It has provided

a great deal of flexibility in how the publication of a scholarly article can be conducted (13). The advantages of using the electronic submission system includes a reduction in the number of manual steps but increases the ability to communicate with the authors and reviewers when monitoring the peer review process, hence ensuring its high quality (14) as well as increased citation rates for the author (15). The *Croatian Medical Journal* is one of the best examples of a national open-access journal, which made full-texts of its articles freely available online, reached out to the international community, got archived in PubMed Central, and increased its citation rates to the level of the journal with the highest impact factor in Southeast Europe (16).

ADUM will need to completely cease accepting hard copy manuscripts and work on reducing the turnaround time without reduction in the quality of the review process. This will help cut cost for the journal and the authors, as well as speed the transmission of information among the authors, reviewers and the editorial office. This will also help save the environment by reducing the number of papers used for the entire publication exercise.

CONCLUSION

ADUM has served its purpose well in the era before the arrival of the internet and the world-wide-web. However, in order to stay relevant in this well linked scientific community, ADUM has to strive to drop the traditional approach and embrace the digital world entirely. This will ensure up-to-date information and research outputs are disseminated the moment they are made available. Once, such a turnover is achievable, other process such as being indexed in reputable databases will automatically follow.

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