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Submitted: 15 Jan 2016

Accepted: 20 1 2016

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Abstract

Indexation status matters for scholarly journal prestige and trust. The performance of Malaysian medical journals at the international level is gauged through the global citation databases, and at the national level through MyCite, a national citation indexing system. The performance indicators include journals publication productivity, the citations they garner, and their scores on other bibliometric indices such as journal impact factor (IF), and h-index. There is a growing consciousness amongst journal editorials to improve quality and increase chances of getting indexed in MyCite. Although it is now possible to gauge journal performance within Malaysia, through MyCite, the government and public are concerned about journal performance in international databases. Knowing the performance of journals in MyCite will help the editors and publishers to improve the quality and visibility of Malaysian journals and strategise to bring their journal to the international level of indexation.

Keywords: citation analysis, journal impact factor, indexing, bibliometric analysis, Scholarly publications

Introduction

The establishment of the Malaysian Citation Centre (MCC) in 2011 marks the beginning of a proper monitoring and bibliographic control of Malaysian scholarly journals through *MyCite*, a Malaysian citation indexing system, and through *MyJournal*, the country's journal hosting management system. At present, *MyJournal* assumes the role of a backup system for 348 Malaysian journals so that the articles could be searched and accessed on a single platform. *MyCite* extracts data from *MyJournal* to report the performance of the journals indexed. The information provided by *MyCite* would help improve the publication quality of scholarly journals in Malaysia, as publishers are made aware of their journal's productivity and citation impact, and assess the performance between journals in the various subject fields.

Performance of Malaysian Medical Journals in Universal Citation Databases

Medical sciences researchers want to publish in the best journal possible; in their preferred journals which have received impact in universal citation databases. Malaysian journals indexed by the Thomson-Reuters's *Web of Science (WoS)* and Elsevier's *Scopus* are considered to have a certain degree of quality and authority, and since the distribution of this database is worldwide, journals cited in *WoS* can be said to have achieved a certain degree of "visibility" (1). Also, increasingly Malaysian universities have mandated their academic researchers to publish only in journals indexed by *WoS*. However, the number of Malaysian journals which have gained indexation in *WoS* is small (13), and four titles are from the following medical journals: *Asia-Pacific*

Journal of Public Health; Neurology Asia; Tropical Biomedicine; and Malaysian Journal of Pathology. Another four titles (*Archives of Orofacial Sciences; International Medical Journal Malaysia; Malaysian Journal of Medical Sciences; and ASEAN Journal of Psychiatry*) are included in the Emerging Source Citation Index (ESCI) and this indicates that “they have passed an initial editorial evaluation and can continue to be considered for inclusion in *WoS*” (2). The journal that attains the highest impact score in *WoS* is *Asia Pacific Journal of Public Health* (JCR 2014, IF 1.459, Quartile 3). Although published by an international publisher (Sage Journals), the country location of this journal is Malaysia since the consortium has awarded the editorial handling to the Faculty of Medicine, University of Malaya. This is an example of a journal that has improved its performance after partnering with an established commercial publisher.

There is an improvement in the number of Malaysian journal titles covered in *Scopus* from 53 titles in 2011 to 78 titles in 2015, and 13 titles belonged to medical journals. They are *International Medical Journal Malaysia; Journal of the University of Malaya Medical Centre; Malaysian Family Physician; Malaysian Journal of Medical Sciences; Malaysian Journal of Medicine and Health Sciences; Malaysian Journal of Microscopy; Malaysian Journal of Nutrition; Malaysian Journal of Pathology; Malaysian Journal of Public Health Medicine; Medical Journal of Malaysia; Neurology Asia; Tropical Biomedicine; and Tropical Life Sciences Research.* Overall, Malaysian medical journals do not perform very well on their impact scores as indicated by their SJR (SCImago Journal Ranking index; all below 1.0) indicating comparatively low citations. *Tropical Biomedicine* attained the highest SJR 2014 score of 0.42 (Quartile 3).

Performance of Malaysian Medical Journals in *MyCite*

By the end of 2015, a total of 46 titles categorised under Medical and Health sciences have been covered in *MyJournal*. However, the performance of some titles cannot be reported due to the failure of these journals to meet *MyCite* journal selection criteria, especially due to timeliness and availability or accessibility factor. Out of these 46 titles, 20 have been completely covered from 2008 to 2015, and they have begun to show their performance in *MyCite*. Table 1 provides the journal performance activity in 2-year and 5-year windows, using journal metrics

namely yearly IF and 5-year IF, and h-index. Two *WoS*-indexed journals (*Asia Pacific Journal of Public Health* and *Neurology Asia*) are not covered by *MyCite* due to constrain issues related to requirement for subscription or purchase from the publishers. As a result it is not possible to show the national impact of these journals.

Out of the 20 journal titles indexed in *MyCite*, four titles obtained h-index score of 4 and above, with *Malaysian Journal of Nutrition* scores the highest h-index of 7. H-index is regarded as a fair measure of journals' current and future impact as it is not constrained by specific 2-year or 5-year publication and citation windows. As a result, journals that publish more articles or gain longer years of coverage by *MyCite* tend to perform better in their h-index scores. However, increasing publication of articles per issue must be adopted with caution as this would have an effect on journal IF scores. The yearly IF measures the average number of times articles published in the past 2-year window that have been cited in 2015. A total of 17 titles attain yearly IF scores, and their IF are low (below 1.0). However, all titles attain 5-year IF scores, indicating that citations are received over a longer period of time. *Malaysian Journal of Psychiatry* attained the highest IF score of 0.089. This journal is not *WoS* or *Scopus*-indexed but performs well in *MyCite*, indicating its national impact. Journals that are covered by both *WoS* and *Scopus* (*Tropical Biomedicine* and *Malaysian Journal of Pathology*) may not rank high in the yearly IF list, but they perform equally well in *MyCite* as well as in *WoS* and *Scopus*. This indicates that an article that has an impact at the national level is also cited well at the international level.

The effect on a journal's IF is observed when it publishes too many articles per issue. For example *Medical Journal of Malaysia* indicates receiving citations in their 2-year and 5-year windows but the IF it obtains is only 0.048. The impact of this journal is reduced when the total number of articles published is too large (i.e. 565 titles in the 5-year period). This indicates that publishing higher number of articles does not guarantee increase in citation. However, it does help to boost its h-index score, which in *MyCite* is 6.

Medical journals indexed in *MyCite* generally have low IF scores as none attained score of above 1.0. This situation indicates that a large number of articles published in Malaysian medical journals are uncited. This was also highlighted in MCC's (2014) report that papers in the fields of medicine and health sciences

Table 1: Performance of Malaysian Medical Journals Indexed in MyCite in 2015 (ranked based on yearly impact)

No.	Journal title	Total articles (5 years)	Total citation (5 years)	Total citation (2 years)	5 Year Impact	Yearly Impact	H-index
1	Malaysian Journal of Psychiatry	113	15	4	0.133	0.089	3
2	Education in Medicine Journal	92	9	6	0.098	0.087	2
3	Journal of the University of Malaya Medical Centre	59	1	1	0.017	0.071	1
4	Malaysian Journal of Medical Sciences	253	17	8	0.067	0.068	4
5	Malaysian Journal of Nutrition	173	18	5	0.104	0.068	7
6	Tropical Biomedicine	399	18	12	0.045	0.063	5
7	Malaysian Journal of Public Health Medicine	65	6	2	0.092	0.059	1
8	ASEAN Journal of Psychiatry	128	13	3	0.102	0.058	3
9	Malaysian Family Physician	125	6	3	0.048	0.049	3
10	Medical Journal of Malaysia	565	34	13	0.06	0.048	6
11	Malaysian Journal of Pathology	113	6	2	0.053	0.044	2
12	Malaysian Orthopaedic Journal	193	3	3	0.016	0.036	1
13	Medicine & Health	80	1	1	0.013	0.034	2
14	Jurnal Sains Kesihatan Malaysia	89	1	1	0.011	0.026	2
15	Malaysian Journal of Medicine and Health Sciences	85	4	1	0.047	0.024	2
16	Journal of Surgical Academia	80	1	1	0.013	0.016	1
17	Pertanika Journal of Science & Technology	226	3	1	0.013	0.011	1
18	International e-Journal of Science, Medicine & Education	86	1	0	0.012	0	2
19	Malaysian Journal of Pharmaceutical Science	44	1	0	0.023	0	1
20	Tropical Life Sciences Research	88	3	0	0.034	0	2

has the highest percentage of articles not cited (91.6%), compared to other fields. Uncitedness is expected to decrease as more journals are

now easily accessible on the Web and this would certainly improve opportunity for readers to find articles (3). In the Malaysian context, even though

some journals are available on the Web, most are not searchable at the article level. However, this situation is expected to improve in time as more journals become accessible through the *MyJournal* platform, and gained indexation status in *MyCite*. This problem of accessibility and visibility of scholarly journals is also highlighted by Kielig and Goncalves (2007), who observed that journals in psychiatry published in Brazil experience improved submission rate and a gentle rise in impact scores only after gaining indexation in *WoS* or *Medline* (4).

Malaysian researchers behaviorally do not cite their colleague's article published in Malaysian journals (5). This citing behaviour of Malaysian medical researchers/authors has resulted in low yearly and 5-yearly IF scores of below 1.0 in *MyCite*. This again may be due to lack of accessibility to the contents of local journals over the Web. However, this situation is changing and citing of Malaysian articles is expected to increase in future. The phenomenon of uncitedness may also be country dependent. In the Malaysian context, there is a need to study the citation behaviour of authors publishing in Malaysian journals, which may reveal the reasons for uncitedness. Issues such as discipline behaviour, the length of citation windows, the size of journals available in a particular field, the length and age of references used and the keywords used by authors needed to be factored to understand cited and uncitedness of articles published in Malaysian journals.

Conclusion

This report focuses on the performance of Malaysian medical scholarly journals, highlighting journals indexation status, publication productivity, the citations they garner, and their scores on other bibliometric indices such as journal impact factor (IF) and h-index. Productivity and citation are only one of the measures for describing the performance and impact of Malaysian journals indexed in *MyCite*. Citation measures, can provide very useful insights into scholarly research and its communication, however they are facilitated by the richness of the citation database. Impact factors, as one citation measure, are useful in establishing the influence journals have within the literature of a discipline. Nevertheless, they are not a direct measure of quality and must be used with considerable care. The impact and ranking of these journals may be used in conjunction with journal publication information as evidence for scholars to show the

likelihood of national impact of the journal they publish in.

The medical journals indexed in *MyCite* generally have low IF scores as none attained score of above 1.0. This situation indicates that a large number of articles published in Malaysian medical journals are uncited. For these journals, it is possible to gauge not only the citation and IF of each title, but also the performance at both the meso (institution) and micro (author) levels. It is hoped that this report will motivate more medical journal publishers to request for indexation so that the national impact of these journal can be gauged, as well as support the government's aspiration to improve Malaysian university ranking by improving the quality of Malaysian scholarly journals, and enriching the national heritage of research content.

Acknowledgement

The author acknowledges the team at the Malaysian Citation Centre who diligently updated and compiled the data in *MyCite* used to produce this report.

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