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Publication patterns and citation analysis of APJTM during 2008 and June 2014

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ABSTRACT

Objective: To draw on data about publication patterns and citation indicators of *Asian Pacific Journal of Tropical Medicine* (APJTM) during 2008 and June 2014 in order to know about the current state of the journal. **Methods:** Data used in this study were collected based on publications in APJTM from 2008 to June, 2014. Information including publication issue, type of manuscript, country/region of corresponding author, funded research paper, and international collaboration were aggregated and analyzed with Excel software. Citation indicators including total cites, average cites of each manuscript, h-index, and impact factors were primarily drawn from Web of Science™ database on June 15, 2014 and changes over the past six and half years were interpreted. The top 10 most cited papers in Web of Science™ database were also analyzed. **Results:** Number of all submissions has arisen from less than 200 in 2008 to over 1 500 in 2013, manuscript acceptance rate has decreased to be less than 14.00% indicating its improvement in quality over this period of time. Out of the 1 115 publications, 23.77% were fruits of funded projects or produced by funded co-authors, 87.08% of all publications in APJTM were submitted by authors from 10 most contributed countries. During the studied period, each published manuscript in the journal has received an average of 1.05 cites, and at least 10 publications has been cited for more 10 times. **Conclusion:** Detailed analysis shows APJTM has made great progress over the past six and half years, but authors' originating countries are still disproportionate. Efforts should be made to improve its citation indicators.

1. Introduction

Asian Pacific Journal of Tropical Medicine (APJTM ISSN: 1995-7645, CODEN: APJTB6) was launched in March 2008 by Hainan Medical College as a quarterly publication. It became bimonthly in 2009 and then monthly in 2010. The journal aims to provide an academic communicating platform for international physicians, medical scientists, and public health workers on tropical medicine, infectious diseases and public health.

The peer-reviewed journal mainly publishes new findings in basic and clinical research on tropical medicine and public health worldwide and particularly pays attention to tropical diseases such as malaria, leishmaniasis,

schistosomiasis, filariasis.

Previous years have witnessed great progress of the journal, it has been indexed by 11 international prestigious database including Science Citation Index Expanded (SCIE), Medline, Chemical Abstracts Service of American Chemical Society (CAS), Cambridge Scientific Abstracts (CSA), Centre for Agriculture and Bioscience International Abstracts (CABA), Global Health, Scopus, Excerpta Media (EM), Zoological Record (ZR), Index of Copernicus, (IC), Ulrich's Periodicals Directory (Ulrich's IPD). The Impact Factor has risen from 0.172 to 0.502 according to the Journal Citation Report released by Thomson Reuters in 2013[1].

This paper aims to draw on data about publication patterns and changes of citation indicators of APJTM over the past six-and-a-half years in order to know about the current state of the journal.

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2. Materials and methods

Data used in this study were collected based on all submissions APJTM has received and published from 2008 to June, 2014. Information on published manuscripts including publication issue, type of manuscript, corresponding author’s name, country/region of corresponding author, funded research paper, and international collaboration were aggregated to calculate manuscript acceptance rate, number of different types of manuscripts, percentage of funded research papers with Excel software. Distribution of contributor’s country, international collaboration between authors from different countries/regions were also analyzed.

Citation indicators including total number of citations the journal has received, average cites each manuscript has received, h-index, and impact factors were primarily drawn from Web of Science™ database on June 15, 2014 and trends in change over the past six and half years were interpreted. Patterns of 10 top-cited papers of the journal in Web of Science™ database were also analyzed.

3. Results

3.1. Publication patterns

3.1.1. Submissions and acceptance

Number of submissions the journal received per year had risen from 181 to 1 524 in 2013, and number of published papers also increased from 57 to 200 more or less per year, and reached a peak in 2010. From 2010 to 2013, number of published papers decreased year by year (Table 1). Considering the total pages of 1 008 per year, it reflects the increased length of individual documents. Figure 1 shows manuscript acceptance rate increased sharply from 31.49% in 2008 to 57.79% in 2010, which reflect the increase in publication frequency. During 2010 and 2014 it decreased to be less than 14.00% indicating its improvement in quality.

3.1.2. Manuscript types and funded research papers

From 2008 and June 2014, a total of 1 115 manuscripts categorized as four types were published in APJTM with original article as the dominant type (Table 2).

265 (23.77%) of the 1 115 published manuscripts are products of funded projects or prepared by funded co-authors. Among the 265 funded research papers, 250 are original articles. Figure 2 shows number of funded research paper each year and percentage it accounts for.

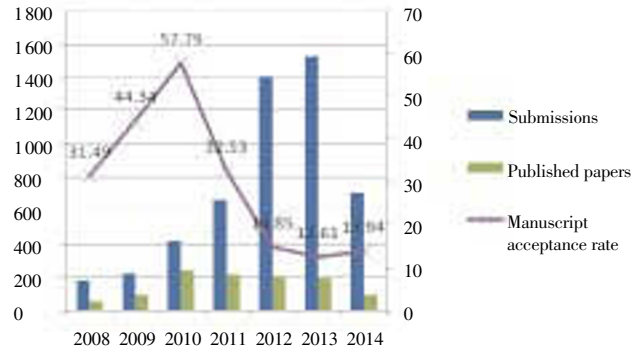


Figure 1. Number of manuscript records and manuscript acceptance rate. Manuscript acceptance rate here is calculated by dividing all received submissions with number of published manuscripts in 1 year.

Excel search and replacement results reveal that fund sources mainly include national level foundation (73), Local government, Universities/Institutions (78), Commission/Council (30), Scholarship/Fellowship, non-government organizations like WHO (4), EU (3), World Bank (2), malaria network (3) and charity(1).

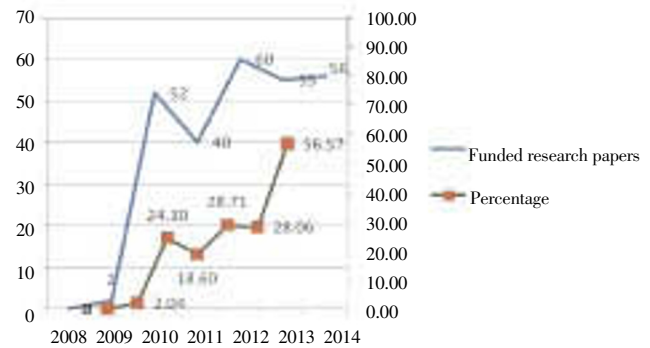


Figure 2. Number of funded research papers and percentage it accounts for submissions each year over 2008 and June 2014.

3.1.3. Originating country/region of corresponding author

The 1 115 published manuscripts were contributed by authors from 62 countries and regions (Figure 3), the number of publications from these countries ranged from 1 to 379. Publication number of 9 countries is 10 or more, for 14 countries 5–8, and there are 43 countries contributed less than 4 publications in APJTM during the studied period. From Figure 4, it can be seen the top 10 contributing countries in the journal counts for 87.09% of the 1 115 manuscripts.

Table 1

Number of submissions and published manuscripts during 2008 and June 2014 in APJTM.

Indicators	2008	2009	2010	2011	2012	2013	2014	Total
Submissions	181	221	417	661	1407	1524	710	5121
Published papers(n,%)	57 (31.49)	98(44.34)	241(57.79)	215(32.53)	209(14.85)	196(12.61)	99(13.94)	1115(21.77)

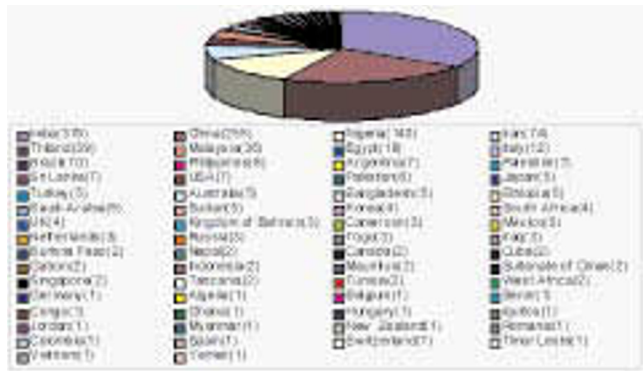


Figure 3. Distribution of authors' originating country based on 1115 published papers in APJTM during 2008 and June 2014.

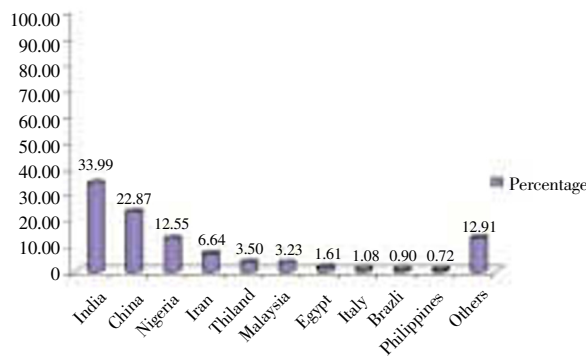


Figure 4. Proportion of publications from top 10 contributing and other 52 countries in APJTM during 2008 and June 2014.

3.1.4. International collaboration

International collaboration accounts for articles that have been produced by researchers from more than one country. Of the 1115 published manuscripts, 78 were contributed by co-authors from 2–5 countries. A total of 66 were prepared by co-authors from 2 countries; for 9, authors were affiliated to units of 3 countries, for 2 manuscripts, the number was 4. Only 1 manuscript was written by authors from 5 different countries. Figure 5 depicts changes of international collaborated publications over the studied period.

More specifically, a total of 46 countries participated international cooperation with researchers from other countries. International collaboration between India and Malaysia, Saudi Arabia and Egypt, Nigeria and European/America countries, Thailand and Japan and USA were more

frequently observed. Co-authorship may be reflect in and might be driven by the pattern of co-ownership of funded research projects that across national borders. Only 4 papers have shared co-authorship across China and other country/region.

Table 2
Manuscript type of 1115 published papers in APJTM.

Manuscript type	Total number	Percentage
Article	1041	93.36
Review	40	3.59
Letter	6	0.54
Editorial material	28	2.51
Total	1115	100.00

International collaboration

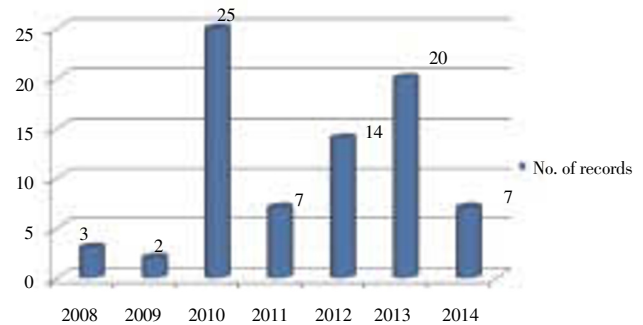


Figure 5. Number of articles produced by researchers from more than one country during 2008 and June 2014.

3.2. Citation analysis

3.2.1. Citation indicators

All the 1115 published manuscripts have been indexed by SCIE in 2010, since then, the journal has received total cites of 1171 times in Web of Science™, and average cites per published manuscript has received was 1.05 times. h-index was 10 indicating at least 10 manuscripts has been cited for at least 10 times in the database.

The impact factor in 2012 is 0.502, and 5-year impact factor is 0.403 according to the 2013 JCR[1]. During the same period of time, IF and 5-year impact factor of the leading international journal in tropical medicine, *The American Journal of Tropical Medicine and Hygiene* is 2.534 and 2.896[2]. Other main indicators are presented in Table 2. Figure 6 shows both total cites and cites per manuscript received reached a peak in 2011 then decreased slightly from 2011 to June 2014.

Table 3
Changes in main citation indicators over 2008–June 2014.

Indicators	2008	2009	2010	2011	2012	2013	2014
Total publications	57	98	241	215	209	196	99
Total cites	33	54	367	378	268	70	1
Self cites	0	0	16	9	2	0	0
Cites/document (1year)	0.58	0.55	1.52	1.76	1.28	0.36	0.11
h-index	3	3	8	8	5	3	1
IF	–	–	0.172	0.371	0.502	–	–

Table 4

Top 10 most cited papers.

No.	Title	Key words	Type of manuscript	Author	Country	Year	Total cites
1	Leishmaniasis: Current status of available drugs and new potential drug targets	Leishmaniasis; Drug resistance; Drug targets; Drugs	Review	Rakesh Kumar Singh	India	2012	38
2	Larvicidal and repellent activities of <i>Sida acuta</i> Burm. F. (Family: Malvaceae) against three important vector mosquitoes	<i>Sida acuta</i> ; Mosquito vectors; Larvicidal activity; Repellent activity	Article	Marimuthu Govindarajan	India	2010	18
3	Chemical composition and larvicidal activity of leaf essential oil from <i>Clausena anisata</i> (Willd.) Hook. f. ex Benth (Rutaceae) against three mosquito species	Mosquito vectors; <i>Clausena anisata</i> ; Essential oil; GC–MS analysis; Larvicidal activity	Article	Marimuthu Govindarajan	India	2010	21
4	Synthesis and antibacterial evaluation of 2-substituted-4,5-diphenyl-N-alkyl imidazole derivatives	Antibacterial activity; Imidazole derivatives; N-alkyl imidazole	Article	Abhishek K Jain	India	2010	15
5	Spatio-temporal distribution of malaria vectors (Diptera: Culicidae) across different climatic zones of Iran	Anopheles; Malaria; Distribution; GIS; Iran	Review	Hanafi-Bojd AA	Iran	2011	14
6	Larvicidal and repellent properties of some essential oils against <i>Culex tritaeniorhynchus</i> Giles and <i>Anopheles subpictus</i> Grassi (Diptera: Culicidae)	<i>Cymbopogon citratus</i> ; <i>Cinnamomum zeylanicum</i> ; <i>Rosmarinus officinalis</i> ; <i>Zingiber officinale</i> ; Essential oils; Larvicidal activity; Repellent activity; Mosquito vectors	Article	Marimuthu Govindarajan	India	2011	14
7	Antibacterial activity of lemongrass (<i>Cymbopogon citratus</i>) oil against some selected pathogenic bacteria	Antibacterial activity; Lemongrass Oil; Bacteria	Article	Bashir Ahmad Fomda	India	2010	13
8	Human cystic echinococcosis: epidemiologic, zoonotic, clinical, diagnostic and therapeutic aspects	Human cystic echinococcosis; Zoonotic disease; Epidemiology; Echinococcus granulosus; Hydatid cyst; Surgery; Chemotherapy	Review	Shyamapada Mandal	India	2012	12
9	Influence of ellagic acid on prostate cancer cell proliferation: A caspase-dependent pathway	Apoptosis; Prostate cancer; Caspases	Article	Arshi Malik	Saudi Arabia	2011	12
10	Exploration of larvicidal and adult emergence inhibition activities of <i>Ricinus communis</i> seed extract against three potential mosquito vectors in Kolkata, India	<i>Ricinus communis</i> ; Mosquito vectors; Larvicidal activity; Probit analysis; Adult emergence inhibition	Article	Shyamapada Mandal	India	2010	12

**Figure 6.** Total cites vs. cites per manuscript received over 2008 to June 2014.

3.2.2.10 top-cited papers

10 top-cited papers published in APJTM during 2008 and June 2014 were identified based on total cites they received in the Web of Knowledge database of Institute for Scientific Information (ISI) as of the date of research (Table 3). The average citation frequency of the 10 papers was 16.9 times ranging from 12 to 38 times since publication. Except

3 reviews, all the other 7 manuscripts were published as original article. 9 of the 10 top cited papers dealt with certain tropical diseases (7) or antibacterial activities (2); and 4 of the 7 focused on larvicidal activity of plant extracts and mosquito-borne diseases. 8 of the 10 top-cited papers were contributed by authors from India, 1 by authors from Iran, and 1 from Saudi Arabia. The most cited paper entitled “Leishmaniasis: Current status of available drugs and new potential drug targets” was written by Marimuthu Govindarajan from India as single author who also contributed to other 2 of the 10 top-cited papers (single author), all the 3 were about Larvicidal activity of plant extracts. Shyamapada Mandal contributed 2 on the top 10 list.

4. Discussion

4.1. Publication patterns

Back in 2008, when APJTM was newly launched, the

main problem we faced was lack of submissions, but now our problem is how to select most excellent ones among thousands of submissions from all over the world. During this process, the journal has gained great success in many aspects.

First of all, the journal was published by Elsevier, one of the biggest medical publishers in the world, its platform of ScienceDirect helps the journal to be exposed to wider viewers, which contributes a lot to the increase in submissions. In 2010, the journal became a monthly publication; thereafter it constantly publishes 17–22 manuscripts each issue, make the total documents doubled. In some degree, larger quantity of submissions guarantees better manuscript quality and larger volume of publications, which in turn may increase citation frequency. From 2010 to 2012 manuscript acceptance rate decreased from 57.79% to be less than 14.00% indicating its improvement in quality since it's widely accepted that journals with lower article acceptance rates are frequently considered to be more prestigious[3].

Internationalization is another factor to the success of the journal. Started from 2009, we applied for inclusion of several international relevant databases. During this process, journal evaluation standards helped us to improve editing and publishing quality of the journal. Besides, journal selective criteria of prestigious databases favor publications included by other international databases, also wide distribution of authors' originating countries counts.

Besides, during the past few years, WHO has aroused more attention ever to tropical diseases among scientists[3]. Since 2005, when the Neglected Tropical Diseases was first defined, output of research papers on tropical diseases has greatly risen[4]. America, European Union also promised to raise grants supporting for researches on prevention and control of tropical diseases[5]. A report on neglected tropical medicine reveals that the increased output of papers on tropical medicine is more significant in India[4]. Other countries showing accelerated research growth in tropical medicine include China, Brazil, India and South-east Asian countries, most of which are among the top 10 most contributing countries of APJTM, this may partially explain author' originating country distribution of the journal.

Although international collaboration analysis shows researches from developed countries including USA, UK, Japan, and Germany are active in tropical medicine. But the proportions of submissions from these countries are very low those there are some. The journal needs to attract more excellent manuscripts from substantial research countries like UK, America.

4.2. Citation analysis

The impact of science publications is often estimated by the number of citations they receive [3]. However, impact factor can be affected by journal type, number of total documents and self citations when used alone to evaluate scientific influence of academic journals. It is better also to consider total cites and h-index [7]. H-index means at least h manuscripts have received h times of citation during

a certain period of time; it also means citations received by other documents in the publication is less than h times [8].

According to the data retrieved from Web of Knowledge, all published manuscripts of APJTM have been indexed by SCIE in 2010, since then, the journal has received total cites of 1171 times. The impact factor in 2012 is 0.502, and 5-year impact factor is 0.403 according to the 2013 JCR [1].

Main citation indicators shows increasing trend from 2008 to 2011, both total cites and cites per manuscript received (1 year) reached a peak in 2010 then decreased slightly over 2011 to June 2013, this may due to the shorter time of circulation.

From 2012 till now (June 18 2014), a total of 504 documents of APJTM can be retrieved from Web of Science™ with total cites of 339 times, average cites received per year is 113 times, and h-index is 5, all of which are significant lower than the leading international journal in tropical medicine, *The American Journal of Tropical Medicine and Hygiene*. The latter published 1 019 documents during the same period of time, and has got 1 906 times of citation, and an average citation of 635.33 times per year.

Detailed analysis shows APJTM has made great progress over the past six and half years, but authors' originating countries are still disproportionate. Efforts should be made to improve its citation indicators.

Conflict of interest statement

The authors declare that we ha no conflicts of interest.

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