TRENDS IN SOUTHEAST ASIAN ARTICLES IN TOP-TIER JOURNALS

ABSTRACT

Objective: The objective of this analysis was to assess trends in the number of articles from Southeast Asia (SEA) published in PubMed-listed journals, focusing on top-tier journals, and to identify potential factors associated with publication activity.

Research design and methods: Using PubMed, we investigated the number of articles listing Hong Kong, Taiwan, Singapore, Malaysia, Philippines, Thailand, Indonesia, Cambodia, Vietnam, Laos, or Myanmar in the “Affiliations” field each year from 2000 through 2013. Top 5 journals by impact factor across 18 therapeutic areas were identified and publication numbers in those journals analyzed as a percentage of total publications. Log-linear (Poisson) regression analysis was used to assess factors associated with citation numbers.

RESULTS: SEA publications represented 2.3% of total publications on PubMed between 2000 and 2013. The highest number of SEA publications were from Taiwan (46.6%), followed by Hong Kong (17.1%), Singapore (14.8%), Thailand (11.3%), and Malaysia (6.9%). Publications from each of the other SEA countries comprised <1.0%. In top 5 journals, articles from SEA comprised between 0.3% (ophthalmology) and 1.0% (dermatology); mean was 1.4%. Total number of citations and citations in top 5 journals have significantly increased over time in SEA (p<0.01). Total number of articles per country were significantly correlated with per capita gross domestic product (p<0.0001), health expenditure (p<0.0001), and number of impact factors, using the Journal Citation Reports database (Thomson). Country-specific citation analysis was performed on the total number of articles, top 5 journals, and to identify potential factors associated with publication activity over time in SEA.

INTRODUCTION

Objective: To assess trends in the number of articles from Southeast Asia published in PubMed-listed journals, focusing on top-tier journals, and to identify potential factors associated with publication activity.

METHODS: We calculated trends in the number of citations on PubMed between 1 January 2000 and 31 December 2013 in which a SEA country was listed in the author affiliation field.

Our analysis included all countries in the Association of Southeast Asian Nations (ASEAN) with a population of >500,000 – specifically China (Hong Kong, Taiwan, Mainland China), Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. The remaining ASEAN countries were not included.

For reporting standards, we assessed publication trends in Australia (chosen as a comparator because it was a geographically adjacent, English-speaking, developed nation).

Top 5 journals were defined as those 5 journals with the highest impact factors, using the Journal Citation Reports database (Thomson) 2012 report, within the following therapeutic categories: cardiology, dermatology, endocrinology, gastroenterology, general medicine, haematology, infectious disease, neurology, obstetrics and gynaecology, oncology, ophthalmology, paediatrics, psychiatry, radiology, respiratory medicine, rheumatology, surgery, and urology.

In each calendar year of our analysis, we identified the number of citations in PubMed at the country level in each of the categories.

In order to identify potential factors associated with publication trends, data on per capita gross domestic product (GDP), development status, national health expenditure, and English language use in each country was collected from World Bank sources.

English language was included as a binary variable, using the 2013 English Proficiency Index: coded 1 if country was rated as moderate or better and 0 if country was rated low or worse.

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STATISTICAL ANALYSIS

We used contingency tables and a Bonferroni correction to identify country-specific factors associated with publication activity. Log-linear regression analysis was used to assess the relationship between national factors and total number of publications.

RESULTS: The highest number of citations from SEA countries (total and top 5 citations) was significantly correlated with publication activity in each therapeutic category, compared to a comparator country (Australia) over time, using the 2013 English Proficiency Index: coded 1 if country was rated as moderate or better and 0 if country was rated low or worse.

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LIMITATIONS

Impact factors for a single year were used as a surrogate measure of “top-tier” journals.

Citations where the affiliation included more than one SEA country were counted in each country (therefore some double-counting occurred).

Citations not listed on PubMed were not included.

CONCLUSIONS

Our study indicates that, although citations from SEA countries are increasing over time, this region is still under-represented in the international peer-reviewed literature relative to its population size.

Moreover, the vast majority of publications from this region originate in wealthier and more developed countries. (Taiwan, Hong Kong, Singapore).

As expected, the number of publications from SEA countries is significantly correlated with national GDP, development status, health expenditure, and English-language proficiency.

Qualitative research is now needed to assess what factors may assist authors from this region to get their research published, particularly in higher prestige journals.

References


