Hypothetical Influence of Non-indexed Spanish Journals on the Impact Factor of the Journal Citation Reports-indexed Journals

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Introduction

The impact factor (IF) is a bibliometric indicator published annually by Thomson ISI (Institute for Scientific Information), which continuously records scientific citations by the reference lists of articles from a large number of the world's major journals included in the Science Citation Index-Journal Citation Reports (SCI-JCR) database. Nevertheless, Anglo-American publishers countries and English language journals prevail in SCI-JCR with respect to numbers and IF levels. For this reason, the IF of most non-Anglo-American journals is not known. A method that can evaluate this lack of representation is to hypothetically complement the SCI-JCR with journals coming from countries that do not have a suitable representation, as is the case of Spain. A recent citation analysis of 86 Spanish medical journals of the greatest interest and quality was performed in Spain; this work has permitted to obtain the IF of these Spanish medical journals. Our purpose in the present study was to establish whether the citations coming from a selection of Spanish journals influenced the 2002 IF of the SCI-JCR- indexed journals and to identify which subject categories of this database had the largest increase in their 2002 IF.

Methodology

A total of 14,808 citations received by articles published during 2000 and 2001 in 86 different Spanish biomedical journals included both in the Spanish medical database Índice Médico Español and in some of the following international databases: Medline, Embase, SCI or Current Contents, were recorded and analysed. The ISI methodology was used in order to correctly compare the results with those of the SCI-JCR database. Journals related to continued training, spreading and humanities were excluded of the citation analysis. All these 14,808 recorded citations were introduced in a Microsoft Access database to facilitate the analysis. Moreover, both all the received cites by SCI-JCR-indexed journals on health sciences subject categories corresponding to 2000 and 2001, and the total number of cites received by the 86 non-indexed Spanish journals were included in the created database. These cites were recorded by scanning the *Cited Ref Search* (*timespan*=2002) field of the ISI Web of Science. The search profile was performed by combining the *cited work* and *cited year* fields. Abbreviated journal titles of the Spanish journals were introduced in the *cited work* field, whereas search equation 2000 OR 2001 was introduced in the *cited year* field. Corresponding subject categories were assigned in the non-indexed Spanish journals. The 2002 hypothetical IF of each SCI-JCR-indexed journal was calculated by adding, in the numerator: 1) the number of citations from the papers published in 2000 and 2001 in SCI-JCR-indexed journals, and 2) the number of citations received by the journals included in the SCI-JCR from the articles published in this period in the 86 non-indexed Spanish journals. The analysis of the hypothetical increase in the IF corresponding to the different subject categories of the SCI-JCR was estimated by adding, in the numerator, the increase in the IF of each journals related to the subject areas, the denominator remaining invariable (which corresponds to the total journals included in the corresponding subject category).

Results

A total of 3880 journals were identified, being 1044 (27%) not included in the SCI-JCR. In the remaining 2836 SCI-JCR-indexed journals, an increase in the IF was identified in 1291 journals (45,5%). The SCI-JCR-indexed journals average increase was 0.024 points (95% confidence interval: 0.022 to 0.026). The journals with the largest increase in the IF were: *Medicina Clínica* (0.405 points); *Medicine* (0,362); *New England Journal of Medicine* (0,342); *Hybridoma* (0,265) and *Cancer Journal of Clinicians* (0.228). The subject categories with the largest increase in their IF were: "General Medicine & Internal" (0,028 points); "Gastroenterology and Hepathology" (0,027); "Rheumatology" (0,025);

"Infectious Diseases" (0,024); and "Allergy" (0,023). Regarding the 20 journals with the highest increase in their IF, there were 6 journals corresponding to subject category "General Medicine & Internal"; 4 to "Oncology"; and 2 to "Psychiatry". These origin of these 20 journals was as follows: the USA (11 journals), the United Kingdom and Spain (4 journals, each one) and New Zealand (one journal).

Conclusions

We have concluded that the inclusion of the citations from a selection of Spanish medical journals in SCI-JCR journals produced a slight increase in their IF, chiefly in the Anglo-American journals, due to their better representation in the Journal Citation Reports. Something similar takes place in the Spanish journals, mainly published in Spanish-language and, therefore, more accessible to Spanish investigators, with the benefit of the Spanish citations and self-citations. There is a tendency that shows that the increase of the IF is inversely related to the number of subject categories to which each of the SCI-JCR journals belong to.

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