

EDITORIAL

BIBLIOMETRICS, A NEW WAY TO HELP A SCIENTIFIC BOARD PREPARE A WORLD SCIENTIFIC CONGRESS

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Preparing a world wide scientific congress is a difficult task. In addition to the selection and handling of submitted abstracts, the scientific board has a key role in inviting leading experts of the field to give lectures, chair sessions and add value to the discussions of the studies. This component plays an important role to attract papers and participants and contribute to the success of a congress. When the congress is nationally-targeted and its topic relatively narrow, the scientific board can quite easily select the relevant experts from the knowledge of its members. The process is more difficult when the congress is world-targeted and its topic enormous. This is the case for the International Association of Geriatrics and Gerontology's (IAGG) World Congress of Gerontology which will be held in July 2009, in Paris. The spectrum of geriatrics/gerontology is huge, including themes as diverse as biogerontology, social sciences, psychology, epidemiology, clinical research about a wide range of disease or conditions. Research in geriatrics/gerontology is published in a broad spectrum of journals, not only journals dedicated to geriatrics/gerontology, but also general journals or journals of other specialities. This point does not make experts identification easier. Finally, the IAGG world congress has also set an objective of inviting experts from countries newly implicated in geriatrics/gerontology, involving them in the world dynamics around the theme and favour interactions between scientists from all countries. This objective also adds some difficulties for identifying those experts.

In this view, the local committee of the 2009 IAGG World Congress of Gerontology has conducted a bibliometric study to identify major experts of geriatrics/gerontology around the world. For this purpose, we conducted a systematic search in Medline database available (via PubMed website) on the 5-year period 2003-2007. Publications issued from centers implicated in geriatrics/gerontology, were identified by a search using the terms aging, truncated words for geriatrics or gerontology [geriatr* OR gerontol* OR aging] in the field Affiliation of the database. Finally, 14713 publications were identified and exported into Microsoft's Excel spreadsheet. First and last authors of these publications have been extracted, as well as the country of the authors, the name of the journal, the year of publication, and the e-mail address of the correspondent author when available. By this process, 11928 authors have been identified allowing the calculation of the number of

publications done by each author during this period. To add some qualitative aspects to the search, we added the 2005 impact factors of the journals in this database. This was done by a macro function of Excel software using another sheet containing the list of journals and the corresponding impact factors. Finally, this made possible for each author the calculation the sum of IF obtained by his/her publications as first or last author during the period. By this process, we listed the 1893 authors having a IF sum above 10, and added filters to easily sort by country and/or by descending order of IF sum. The list was sent as an electronic file to each member of the scientific board to be used for selecting experts as well as the list of publications which gave more information about the topics of these authors.

The use of bibliometric approach to help a congress scientific board has not been reported in medical literature to our knowledge. It has the advantage of identifying on the basis of objective criteria the scientists who have been the most productive during the last years. More generally, this approach adds some objective information to answer the old and difficult question *Who is an expert ?* Traditional selection of experts by scientific boards offers a large place to undefined or subjective criteria, and the process might be influenced - consciously or not - by factors out of any scientific consideration. Recently, a correspondence in Nature pointed that very few women speak at science meetings (1) and this might result from choices done by scientific boards which are usually mainly constituted by men. If lecturers and chairmen were selected using criteria risen from bibliometrics - which ignore authors sex - one could exclude any suspicion of sexism in the process !

Even if it provide objective factors to select experts, the bibliometric approach has some limitations. First are the limitations related to the MEDLINE queries, and in this case, mainly to the identification of scientists of geriatrics/gerontology centers from the name of their affiliation. Important publications or authors may have been missed by the search if the authors' institution name did not include the term geriatric, gerontology or aging. For instance, scientists working in the field of dementia which are affiliated to neurological centers are not retrieved by such queries, even though their subject is closely related to geriatrics/gerontology. It is also the case for scientists from other specialities who dedicate most of their research in elderly studies. At the contrary, the search also

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retrieved many authors working out of the field of geriatrics/gerontology (i.e. pediatrics) and affiliated to an institution having the term aging in its name. For instance, a large number of publications coming from the US National Institute on Aging were clearly far from geriatrics/gerontology themes. Second, in the author selection process, we have chosen to ignore all authors except the first and the last and we used an indicator which a mix of the publication number and IF as the selection criteria, and this strategy also might be the subject of debate. For instance, the importance given to the IF clearly favoured the selection of authors working in biological sciences. Third, such search dealt poorly with homonymous authors which have not been distinguished if their institutions were in the same country.

Even if the objective nature of bibliometrics is attractive, it should be noticed that this approach can't be the only one to be

used to identify experts and other factors might be taken into account by the scientific board, like for instance links to professional or scientific societies, presentation skills, or involvement in teaching. In fact, for the case of the 2009 IAGG World Congress of Gerontology, this bibliometric approach was used by the scientific board as an add-on to the complex process of expert identification. Despite some limitations, we believe that bibliometrics is a new valuable and reliable method to afford objective information to help scientific boards of international congresses selecting their experts.

Reference

1. Silver PA. Why do so few women speak at science meetings? *Nature*. 2007;446:856.