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LETTER TO THE EDITOR

Preparation of bibliometrics papers

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Abstract: Suggestions are made on how to write papers on bibliometrics.

Key words: Bibliometrics, guidelines, citations, normalisation.

A number of good scientists, and some inexperienced would-be bibliometricians, try to write papers on bibliometrics, even if they are new to the discipline. It is rather easy to interrogate databases such as Dimensions, Scopus and the Web of Science, and generate lots of numbers, and create pretty diagrams of the relationships between authors, countries, institutions or keywords. But these statistics really do nothing for the subject and may be misleading or even dangerous if people take any notice of them. Bibliometrics papers should always have a serious research question, and use an established methodology.

There are four major rules, which all such papers should follow. First, the subject area must be rigorously defined, and the precision and recall of the filter that is used to identify research outputs determined so that the reader knows how many papers there really are, and if the filter is any good (Lewison 2011). Second, all counts of citations must be in a fixed time window, so that early papers can be fairly compared with more recent ones. Moreover, citation counts by themselves do not equate to research quality, and there are several other indicators that can, and should, be adduced to try and estimate this elusive parameter. Third, all credit for publications and citations should be based on fractional, not integer, counts. [As an aside, I recently discovered that one paper of which I was apparently one of over 5570 authors had received more than one third of all my citations. This gave a very distorted view of my output! But the author Lewison,G was in fact a homonym, and not me.] Fourth, and most important, all bibliometric analysis must be *normalised*, so that the reader can know if the amount and distribution of research outputs are appropriate for the challenge. In medicine, this comes from the disease burden. In other subject areas, it may come from rival countries, and comparisons can be made on the basis of wealth, or fraction of all science, or perhaps of a major field.

There are also some minor rules. Percentages in the text should be given only to two significant figures. Bibliometrics is not particle physics where theory and experiment agree to one part in a billion or better. Readers cannot compare numbers with more than two significant figures. Diagrams should make the message immediately clear and be scaled logarithmically if that helps. Simple lists of leading authors or institutions are usually not helpful, and may anyway be quite wrong and cause offence to those misplaced or omitted.

Finally, bibliometric studies are not simple compilations of data. They should always have a definite purpose. This may be to evaluate the research outputs of an entity relative to its peers, or to compare the international, national or regional research outputs with the scale of the challenge that they are intended to meet.

REFERENCES

Lewison G. 2011. Definition of Cancer Research: Journals, Titles, Abstracts or Keywords? DESIDOC J Libr Inf Technol 31(5): 333-339.

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