


## LETTER TO THE EDITOR

### Bibliometrics and Scientometrics, essential knowledge and practice for students of medical sciences

Bibliometría y Cienciometría, conocimiento y práctica indispensables para los estudiantes de ciencias médicas

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#### Dear Editor:

During the last century there has been a spectacular increase in scientific production at international and national level, as well as its compilation in automated bibliographic databases, whose results have great influence on the economic and social development of countries, which demands quantifying and evaluating scientific and technological activity, its results and yields.

Bibliometrics and scientometrics are increasingly positioned as essential disciplines to measure the results of science, and despite this, not all members of the student scientific community recognize them as necessary in the information and communications era, as a way to improve and bring to higher levels the excellence in the student research process and its impact on scientific publications.

Bibliometrics allows describing phenomena, trends and regularities that occur in a given field of science, which in the case of the analysis of the results achieved by the Cuban student scientific journals of medicine, are very useful.<sup>(1)</sup>

Bibliometrics also studies the quantitative aspects of the production, dissemination and use of the information recorded, for which purpose it develops models and mathematical measures which, in turn, serve to make forecasts and take decisions about these processes.<sup>(2)</sup>

Moreover, scientometrics analyzes the quantitative aspects of science as a discipline or economic activity, is part of the sociology of science and finds application in the establishment of scientific policies, where it includes, among others, those of publication.<sup>(3)</sup>

The creation of scientific knowledge is the primary purpose of the research process, and scientific publication is the culminating step in this process. Through scientometrics and bibliometrics, the activity of science, including publications, can be calculated and valued through bibliometric indicators.<sup>(4)</sup>

By developing these analyses, students can obtain parameters through updated data, which allow them to assess the scientific impact of published articles and thus obtain conclusions that allow them to improve the profile of journals, and improve the impact on the scientific community.

The periodic evaluation of the scientific production of a journal is the reliable tool that will allow the evaluation of the trend and quality of the science published in it.<sup>(5)</sup>

Students of medical sciences need to convert bibliometrics and scientometrics into indispensable knowledge and practice that will allow them to apply them for the analysis of publications and the study of research and technological activity, considering that there is a vertiginous increase of such studies among the university community, which is evidenced by the increase of scientific articles in Student Scientific Journals in recent times, mostly original articles.

The growth of scientific production, as well as the variability of visualization techniques in the exploration of large databases, has boosted the use of these disciplines, which have experienced a great development as one of the effects of the digital revolution in science<sup>(6)</sup>

The preparation of future health professionals on the characteristics, advantages and perspectives of bibliometric and scientometric studies becomes a necessary reality, so that once graduated they are able to master the processing of electronic literature by creative and advanced methods.

Hence, this letter highlights the importance of stimulating the use of bibliometrics and scientometrics by students of the medical sciences, in order to continue raising the quality of student scientific journals and contribute to the scientific debate that so enhances these journals and is so necessary for the progress of science.

#### **Conflict of Interest**

The authors declare that there are no conflicts of interest related to the study.

#### **Authorship Contribution**

GAHH and ZGG: Conceptualization, Data curation, Formal analysis, Research, Methodology, Project management, Resources, Software, Supervision, Validation, Visualization, Writing the original draft, Writing, revising and editing.

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