

Guest editorial

## Impact factors and citations counts: A state of disquiet

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A great degree of international nursing editor and scholar attention has been focused in the past decade on bibliographic measures such as “impact factor” and citation counts as reflected in previous editorials within the *International Journal of Nursing Studies* (e.g. [Urquhart, 2006](#); [Nolan et al., 2008](#)). Impact factors are numbers assigned to specific journals chosen by a U.S. company (Thomson Reuters Scientific), which developed the “ISI Web of Science.” Impact factors are defined as reflecting the number of times articles in a journal are cited in two preceding years divided by the total number of articles in that journal in those 2 years ([Amin and Mabe, 2000](#)); citation counts are “the number of times a scientific paper or scientist is cited” ([Meho, 2007](#), p. 2); citation counts are the essential ingredients in the computation of impact factor. Thomson is extremely selective in the journals they choose, and the only way a journal can obtain an “impact factor” is to become a part of Thomson’s list of indexed journals. In many countries higher education institutions are now using the impact factor of journals in which their faculties publish in ways intended and unintended; they are using these types of measures for faculty recruitment, promotion/tenure, as indices of the quality of an individual’s or of a department’s publications, and also to make decisions about the research climates and allocation of funds to departments. Similarly, university administrators and funding agencies are using such measures to establish rankings among institutions nationally or internationally, which again serve a variety of functions. For example, in the UK under the newly introduced Research Excellence Framework ([Nolan et al., 2008](#)) the quality of research outputs will in future be determined almost entirely by citation counts rather than the traditional method of peer review. In addition, [Monastersky \(2005\)](#) has reported with concern on the extent of the “gaming” by journals to increase their citations, whereby some journals violate acceptable norms and ethical standards.

This state of affairs has created a sense of disquiet among nursing communities worldwide about the numerous ways

they are being disadvantaged. Among these are that their institutions and/or governments do not make distinctions among disciplines in comparing departments, that impact factor and citation counts are used in ways they were never intended, and that the data bases used for computation of these measures are biased toward the English language and favor U.S. journals. There is merit in many of these expressions of discontent.

Several years ago one nursing editor (the second author of this editorial) became aware that nursing journals were poorly represented in the journals chosen by Thomson. She focused her attention on this issue and asked the International Academy of Nursing Editors (INANE) to become involved in addressing the limited number of nursing journals eligible for impact numbers (only 31 nursing journals in 2005). The Medical Library Association joined in this endeavor, and together, they lobbied Thomson to include more nursing journals. The arguments used were that dissemination of nursing knowledge is critical to nurses in improving the health care of populations, that reaching practicing nurses makes them aware of best practice standards in their specialties, that it is essential that distinctions be made between nursing science/practice from that of medicine, and most importantly, that nursing science and practice are not single entities but have multiple dimensions and specialties/subspecialties ([Freda, 2006](#)). The efforts of this group have been fruitful, both due to the receptivity of the staff at Thomson, and due to more editors worldwide submitting applications for inclusion of their journals. Currently, 75 nursing journals are included in Thomson’s database and are assigned impact factors. While these efforts are most commendable, the number of nursing journals with impact factors still represents a tiny portion of the thousands of nursing journals worldwide that deserve recognition and inclusion [countries represented in the 75 journals include Australia, Brazil, Japan, Switzerland, United Kingdom and the United States]. Ongoing contact with the company

promises to change the landscape for inclusion of an ever-increasing number of journals.<sup>1</sup>

One area where nursing has not yet focused sufficiently is the detrimental effects of the emphasis on bibliometric measures on nursing knowledge development in various countries. A literature review in this area suggests that discipline-specific research studies have been conducted in other fields addressing issues of quality of articles and their association with citation counts/impact factor or journal visibility and prestige, the extent to which the effects of the pressure to publish in high impact factor journals distorts the priorities of scholars regarding choice of topic for research and publication venue, and how this affects their contribution to health care in their countries. These and related questions are critical for nursing to address.

Health care problems vary across the world; as well, cultural differences and understandings affect how health care is practiced to a high degree. Culture- and country-specific research therefore promises to be most useful to multiple countries; similarly, infectious diseases are major concerns in non-western countries. Yet, anecdotal evidence suggests that nurse scientists in many non-western countries are by-passing such themes in favor of topics that in their view are embraced within western paradigms, since they perceive that local health problems are not of interest to western journals. These examples might give us insights into the ways in which the pressure to publish in specific venues, i.e., high impact factor journals, influences the behavior and decisions of nurse investigators, to the detriment of benefiting patients worldwide and contributing to the body of nursing science. We need research in nursing to better understand the phenomena involved, and the extent to which these factors operate in different countries.

Nursing has great potential to allay suffering and to address the health care problems and needs of the world's population through its research. Any policies and practices, at whatever level, that work to the detriment of this overarching goal should be of concern to the nursing community worldwide.

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### Ethical approval

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<sup>1</sup> For information on how journals are selected by Thomson ISI Web of Science, go to: <http://scientific.Thomsonreuters.com/mjl/selection/#jsc>.