Education Research Productivity of Academic Physicians

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About the Authors

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Summary

For several decades, organizations such as the Royal College of Physicians and Surgeons of Canada have encouraged academic physicians to engage in medical education research. The extent to which these efforts have been persuasive is unclear. This article discusses a study whose purpose was to describe changes in the educational research productivity within this group from 1997 to 2010. The authors found that there has been a substantial increase in the publishing reports of medical education research by Canadian academic physicians.

Résumé

Depuis plusieurs décennies, des organismes, dont le Collège royal des médecins et chirurgiens du Canada, encouragent les médecins enseignants à mener des activités de recherche en enseignement de la médecine. Il est difficile de déterminer dans quelle mesure ces efforts ont porté fruit. L'article porte sur une étude décrivant la participation de ces médecins à la recherche entre 1997 et 2010. Selon les auteurs, le nombre de publications par des médecins enseignants canadiens dans le domaine de la recherche en enseignement de la médecine a considérablement augmenté.

For several decades, groups such as the Royal College of Physicians and Surgeons of Canada (RCPSC), the Canadian Association of Medical Education (CAME), and the Association of American Medical Colleges (AAMC) have urged physicians with academic appointments to conduct education research.¹⁻³ They argue that this activity can (1) provide the evidence on which to build an evidence-based educational practice, (2) satisfy institutional expectations for tenure-track faculty to engage in scholarly activity, (3) provide a structured activity through which clinical educators can reflect on their educational practice, and (4) contribute meaningfully to the broader educational discourse. The extent to which this campaign has swayed academic physicians is unclear. The purpose of this study is to describe educational research

productivity among Canada's academic physicians from 1997 to 2010.

Methods

We conducted a bibliometric analysis in which our main metric was the per capita rate of education research productivity of Canada's academic physicians. One of the two terms in this metric is the number of Canadian academic physicians, which we defined as a member of RCPSC with a tenure-track appointment at one of Canada's 17 faculties or schools of medicine. We obtained this information from a database maintained by the Association of Faculties of Medicine in Canada's (AFMC) Office of Research Information Services (ORIS).⁴

The other term in the metric is the number of reports of education research that the members of this group published or presented in a peer-reviewed forum from 1997 to 2010 (the final year for which ORIS information is available). We obtained this information through a query of the database SCOPUS, which is a citation indexing service similar to the Web of Science, but with 20% more coverage (including 100% MEDLINE coverage), and whose features allow users to delimit searches by an author's institutional affiliation, country, subject area, and other parameters that were critical to our data collection. We searched using relevant Medical Subject Headings and Emtree medical terms cognate with *education*, *medical* and included reports that centrally addressed topics of teaching, learning, assessment, evaluation, curriculum development, and related topics that appear in journals such as *Medical Education*, *Advances in Health Sciences Education*, *JAMA's* annual theme issue on medical education and training. (The full query is available on request.)

Results

The number of reports of medical education research, published in a peer-reviewed forum, whose authorship included a Canadian academic physician was 139 in 1997 and 591 in 2010. The numbers of Canadian academic physicians in those years were, respectively, 8,762 and 11,780. The per capita medical education research productivity of this group therefore rose from 16 per 1,000 in 1997 to 50 per 1,000 in 2010.

Discussion

In 1997, Canadian academic physicians were publishing articles on medical education research at the rate of one peer-reviewed publication for every 63 members. By 2010, the rate had risen to one publication for every 20 members. This increase is substantial.

There are few studies of education research productivity among academic physicians with which to compare our results. Similar types of data have been collected to evaluate programs that develop physicians' ability to conduct education research, but the efforts are not systematic or rigorous.⁵⁻¹⁰ A possible comparison is with studies of academic physicians' clinical research productivity. Several studies have been conducted across a variety of academic settings, and these report productivity values ranging from a high of nearly three studies per physician (who had graduated from a physician-scientist training program¹¹) to a low of one publication for every three physicians (who had received a small, early-career research grant).¹²⁻¹⁷

The robustness of bibliometric analyses are limited by the

quality of the information in the databases on which they draw.¹⁸ Our query of the SCOPUS database returned hundreds of articles that did not match our inclusion criteria because they were incorrectly indexed. The AFMC database, though accurately indexed, is built on categories whose broad inclusiveness responds to the needs of medical school administrators more than scientometricians. Among the difficulties stemming from the database's structure was our inability to restrict our count to academic physicians in clinician-educator tracks.

Nevertheless, the data we have presented can be used for three evaluative projects. First, it is one measure of the impact of the efforts to interest academic physicians in education research. Second, it provides a normative context for assessing the research productivity of faculty members who wish to include education research in their annual review. And, similarly, it provides a context for evaluating programs aimed at developing faculty members' ability to conduct education research.

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