2003-2012 American and Canadian Contribution to the World Otolaryngology Literature

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Introduction

• The future of Otolaryngology – Head & Neck surgery (ORL) relies on ongoing knowledge creation.
• Bibliometry, defined as the quantitative evaluation of scientific literature, is an accessible tool to evaluate the progress of the specialty.
• A previous study has shown that European countries had high research productivity (Cimmino et al 2005), however, there has been no study quantifying the American and Canadian contribution to the world ORL literature.

Objective

• To assess the 2003-2012 American and Canadian contributions to the world ORL literature, evaluating the types of articles published and number of authors per paper.

Materials and Methods

• Articles published by 8 journals selected to represent a range of general and subspecialty journals* from January 2003 to December 2012 were reviewed.
• Articles were categorized into primary clinical research, primary basic science research, secondary research such as systematic reviews and meta-analysis, as well as others articles that did not fit the aforementioned classification.
• Data were extracted independently by 4 authors and included: number of authors, types of research, year of publication, and country from which the work originated.
• Statistical analysis was performed using SPSS (v.20).

Results

• The total number of papers in the 8 ORL journals studied increased from 1215 to 1600 during the period 2003-2012. The trajectories in Figure 1 show the American percentage contribution seems to be large and stable over the reporting duration with a step change in 2008 (43.0% in 2003, 35.8% in 2008 and 38.4% in 2012).
• There is a declining trend in the percentage of UK contribution (from 9.1% in 2003 to 3.9% in 2012), with the UK contribution being overtaken by the Canadian contribution (7.2% in 2003 and 6.4% in 2012). Overall there are statistically significant changes in Nationality contribution ($\chi^2 = 166.196$, df = 27, $p < 0.001$).

Discussion

• Research productivity may be affected by funding opportunities, service demand as well as the enthusiasm and motivation of individuals conducting research. It has been demonstrated that faculty members who received funding had significantly greater research productivity and impact than non-funded authors. (Sviders et al 2013)
• The dramatic increase in secondary research output (i.e. systematic reviews, meta-analysis) may reflect the relative ease of conducting these types of studies because obtaining ethics board approval is not necessary and funding requirements are lower.
• Although the data presented in this paper do not represent a comprehensive analysis of all ORL research output from 2003 to 2012, the journals chosen included the most influential general subspecialty journals. The Canadian ORL journal was included to capture a large proportion of the output of Canadian Otolaryngologists.

Conclusion

• The published research output from US, Canadian and UK authors in this survey has decreased over the past decade with a dramatic increase in multi-authorship articles. This trend, whilst indicating increasing collaboration, suggests reduced per capita author publication productivity.

*Include Head and Neck, URO, J of ORL, Arch ORL, Am J Rhinol Allergy, Laryngoscope, Ear Hearing and Clinical ORL.