



D65 Mapping the Literature in Forensic Sciences: A Bibliometric Study of North American Journals From 1980 to 2005

Anny Sauvageau, MD*, A. Godin, S. Desnoyers, C. Kremer, MSc, and S. Racette, BSc, Lab de Sciences Judiciaires, et de Medecine Legale, 1701, Parthenais Street 12th Floor, Montreal, PQ H2K 3S7, CANADA

The goal of this presentation is to describe the evolution of forensic literature in North-American journals over more than twenty-five years. More precisely, it will draw a picture of our literature and describe developments and trends regarding numbers of author(s) per article, represented countries and international collaborations, fields of forensic sciences, types of articles and use of the scientific method.

This presentation will impact the forensic community and/or humanity by providing new insight into forensic science literature. This better knowledge of our body of literature as a whole could help us assess our strengths and weaknesses, and to position ourselves on literature ethical issues.

Introduction: Bibliometric studies have increasingly being used over the last years. Those studies are useful to understand the evolution of literature or trends in particular fields or within a geographical area. However, in forensic sciences, bibliometry has barely been used yet. As a matter of fact, the few bibliometric analyses of forensic science literature that have been performed were mainly focused on most highly cited articles, most prolific authors, and impact factors.

Methods: The two North-American leading journals in forensic sciences were selected: the Journal of Forensic Sciences and the American Journal of Forensic Medicine and Pathology. All articles published in those journals in 1980, 1985, 1990, 1995, 2000 and 2005 were retrospectively analyzed, excluding editorials, guest editorials, tributes, and book reviews. For each article, the following features were compiled: number of author(s), author's country and international collaboration, related field of forensic sciences, and type of article. Furthermore, it was assessed if the article was using or not the scientific method, with testing of hypotheses by statistical analysis. A total of 1693 articles were examined from 1980 to 2005 at a 5-year interval: 1252 articles from the Journal of Forensic Sciences and 441 articles from the American Journal of Forensic Medicine and Pathology. The SPSS 15.0 software was used to perform statistical analyses at a threshold of significance of 5%. Mean values were compared using analysis of variance, while proportions were compared through Chi- square tests.

Results: Over the last twenty-five years, the number of articles per year has doubled. Meanwhile, the average number of author(s) per article has passed from 1.9 to 4.0, significantly increasing by more than twofold ($p=0.000$, $p<0.05$). The relative contribution of other countries in comparison to the United States has significantly increased from 19.5% to 70.8% ($p=0.000$, $p<0.05$), and articles from international collaboration have passed from 1.6% to 10.4%. Articles in the fields of anthropology, ballistic and biology/DNA have significantly increased over the years ($p<0.05$), while articles concerning questioned documents significantly decreased ($p<0.05$). No significant differences were noted for the progress of articles in the fields of chemistry, odontology, pathology and legal medicine, psychiatry, and psychology. As for the types of articles, technical note was the only type of articles showing a significant increase ($p<0.05$). Historical overviews, letters to the editor and review articles demonstrated a significant decrease ($p<0.05$), whereas no statistical differences were observed for case reports, case series and original studies ($p>0.05$). Finally, the number of studies using the scientific method has also significantly increased through the years, passing from 10.53% to 40.73% ($p=0.000$, $p<0.05$).

Conclusion: Forensic literature in North-American journals has expanded and enriched over the last quarter of century. As a matter of fact, the number of articles has increased, so did non-US contributors, international collaborations, and number of studies using the scientific method. However, the significant growth of the average number of author(s) per article could raise some ethical issues.

Forensic Sciences, Literature, Bibliometrics