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Multiauthorship in three oncologic scientific journals

ABSTRACT

Background: Multiauthorship in scientific papers is now the norm. The oncology, as an extremely complex and interdisciplinary science, is particularly prominent in this regard. In order to evaluate the prevalence of single- and multiauthored papers in national and international oncologic journals, a simple bibliometric analysis was undertaken.

Materials and methods: Three scientific journals that publish articles from all fields of clinical and experimental oncology - *Archive of Oncology (Arch Oncol)*, *Journal of Balkan Union of Oncology (J BUOn)*, and *Annals of Oncology (Ann Oncol)* - were analyzed in regard to the number of original papers per issue, and the frequency of single- and multiauthorship in original papers.

Results: The *Arch Oncol*, *J BUOn* and *Ann Oncol* had published 5.5, 10.2 and 7.8 articles per issue, respectively. The single-author articles make 10% of all original papers in *Arch Oncol*, 5% in *J BUOn*, and less than 1% in *Ann Oncol*. The high number of coauthors (>10) had signed 20.6% of articles published in *Ann Oncol* and 1.5% in *J BUOn*; no such article had appeared in *Arch Oncol*. The mean number of coauthors in average original paper published in *Arch Oncol*, *J BUOn* and *Ann Oncol* was 4.3, 4.7, and 8.3, respectively.

Conclusion: The two first journals are similar in regard to most bibliometric parameters; they differ significantly from *Ann Oncol* in these aspects.

Key words: Authorship; Coauthorship; Multiauthorship; Scientific journals; Bibliometrics

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Archive of Oncology 2000,8(3):109-110©2000, Institute of Oncology Sremska Kamenica, Yugoslavia

INTRODUCTION

The multiauthor papers, relatively new issue in science, have appeared in this century. They are largely due to the large size of science, and to the development of new, interdisciplinary fields of science. It is particularly true for biomedical sciences: at the end of the past century, the well-known medical journals had published less than 2% of multiauthored papers. About hundred years later, less than 5% of all published articles were written by one person (1).

In the field of oncology, the multiauthored articles are the rule, with very few exceptions. In the extreme, reports of large, multicentered clin-

ical trials are sometimes signed by a couple of hundreds of persons (2). In this article, we compared three journals - the national, regional, and the European one - in regard to the number of authors/coauthors in original papers.

MATERIALS AND METHODS

The original papers of three journals - *Archive of Oncology (Arch Oncol)*, *Journal of Balkan Union of Oncology (J BUOn)*, and *Annals of Oncology (Ann Oncol)* - were analyzed. Supplements were excluded from this analysis.

The scope of all three journals is similar - they publish articles from all fields of clinical

and experimental oncology. Other characteristics of these journals, and the period analyzed for each of them, are given in Table 1.

The bibliographic aspects analyzed were the number of original papers per issue, and coauthorship (number of authors per paper).

RESULTS

Since its beginning (1994), the *Archive of Oncology* has published 116 original papers in 21 issues (mean 5.5). The *Journal of BUOn*, which started in the year 1996, has published onwards 132 papers in 13 issues (mean 10.2). In the analyzed period (1994-1999), the *Annals of Oncology* have published 435 papers in 56

Table 1. The journals' characteristics

| Journal title | Period | N° of issues/year | Indexed in CC/LS | Indexed in Excerpta Med. |
|---------------|-----------|-------------------|------------------|--------------------------|
| Arch Oncol | 1994-1999 | 4 | - | + |
| J BUON | 1996-1999 | 4 | - | + |
| Ann Oncol | 1994-1999 | 12 | + | + |

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The manuscript was received: 25. 04. 2000.

Provisionally accepted: 03. 05. 2000.

Accepted for publication: 08. 05. 2000.



issues (mean 7,8). These papers were written by 499, 619 and 3603 authors, respectively. Therefore, the mean number of coauthors for average original paper in these three journals was 4.3 (Arch Oncol), 4.7 for J BUOn, and 8.3 for Ann Oncol (Table 2).

Table 2. The bibliometric parameters

| Journal title | N ^o of papers N ^o of issues | Papers/issue (Mean) | N ^o of authors | N ^o of authors article |
|---------------|--|------------------------|---------------------------|--------------------------------------|
| Arch Oncol | 116/21 | 5.5 | 499 | 4.3 |
| J BUON | 132/13 | 10.2 | 619 | 4.7 |
| Ann Oncol | 435/56 | 7.8 | 3603 | 8.3 |

The single-author papers in Arch Oncol were 100% of all original papers published in this journal, 5% in J BUOn, and less than 1% in Ann Oncol.

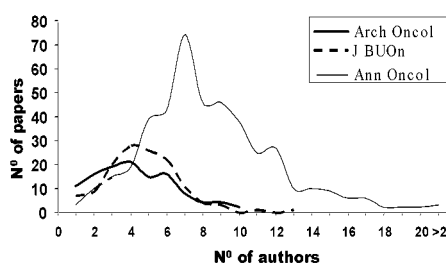


Figure 1. The number of single- and multiauthored papers in three scientific journals

The Arch Oncol had none papers with >10 authors, while J BUOn had 1.5% only. In contrast with these two journals, 20.6% of all papers published in Ann Oncol were written by more than 10 (up to 50 and even more) authors (Figure 1).

DISCUSSION

The Arch Oncol and J BUOn, both published quarterly, are similar regarding the number of authors per paper, to the percentage of single-authored papers and also that of papers signed by >10 persons. They differ significantly in number of original papers/per issue (5.5 and 10.2, respectively). The larger scientific community that publishes in the latter journal probably explains this difference.

Both journals differ sharply from the Annals of Oncology in regard to most bibliometric parameters. In this journal, which publishes 12 issues per year, a much larger number of authors published their reports. The number of single-authored papers in Annals of Oncology is negligible, while the multiauthored papers (ten and more authors) make almost one third (29.4%) of all papers. Many of these are reports

of large, sometimes multicenter trials; no such research was published in Archives of Oncology and Journal of BUOn.

Although the papers written by >20 authors were excluded from this analysis, the average number of authors/paper in Annals of

Oncology is approximately twice greater than that of either Archive of Oncology or Journal of BUOn. This might reflect that the authors choose to publish a more complex research in journals with larger scientific audience; no doubt, the journal of long tradition, and covered by significant indexing periodicals, such as Current Contents - Life Sciences (CC/LS), attracts more authors than the newly appeared ones.

In all three journals the single-author papers are rare; in this regard, they conform to most biomedical journals in which there is constant rise of collaborative writing (2). Therefore, the multiple authorship of articles is now the norm (1,3). Some journals calculated that, during forty years (1950-1988), the number of authorships has increased exponentially, while there was only a linear increase of the number of papers published at the same time (4).

The real problem in such situation is irresponsible authorship, rather than multiple authorship (5). A later study (6) showed that these two problems are connected: the percentage of at least one irresponsible (undeserved) coauthor increased from 0% in papers with two authors to 74% in papers signed by seven and more authors. Therefore, the assignment of authorship has obviously been abused (7). Moreover, since the responsibility has become obscured and diluted, a radical conceptual and systematic change to reflect the realities of multiple authorship has been proposed (3).

CONCLUSION

This simple analysis shows that the average original article in Arch Oncol and J BUOn is signed by a reasonable number of coauthors; much greater number of coauthors in Ann Oncol probably reflects the fact that this journal publishes the reports of large clinical trials, the

work which often requires the contribution of several dozens of investigators.

Acknowledgements

I thank Dr Nevenka Stanojević-Bakić for helpful discussion, Ms Miluša Tešić for help in data analysis, and Ms Brankica Vračar for preparing the manuscript.

REFERENCES

1. Gaeta TJ. Authorship: "Law" and order. Acad Emerg Med 1999;6:297-301.
2. Regalado A. Multiauthor papers on the rise. Science 1995;268:25.
3. Rennie D, Yank V, Emanuel L. When authorship fails: a proposal to make contributors accountable. J Amer Med Assoc 1997;278:579-85.
4. Chew FS. Coauthorship in radiology journals. Amer J Radiol 1988;150:23-6.
5. Huth EJ. Guidelines on authorship of medical papers. Ann Intern Med 1986;104:269-74.
6. Slone RM. Coauthors' contributions to major papers published in the AJR: frequency of undeserved coauthorship. Amer J Radiol 1996;167:571-9.
7. Berk RN. Irresponsible coauthorship. Amer J Radiol 1989;152:719-20.