

Scientific Writing and Journal publications: Practical Hints and Tips. A Review Article.

Osman Mohamed El Mustafa¹, Mohamed O. M. El Mustafa²

1. Prof. Osman Mohamed El Mustafa, Consultant ORL, Head and Neck, U of Gezira, Head ORL, Head and Neck Surgery Council SNMSB, Principal Wad Medani MST, Wad Medani, Sudan.
2. Dr. Mohamed O. M. El Mustafa, Ph.D. Clinical Pharmacology, Assistant Professor U. of Gezira, Pharmacy Program Coordinator, Wad Medani MST, Wad Medani, Sudan.

Correspondence: Prof. Osman Mohamed El Mustafa, Email: abshama50@yahoo.com, Tel: +249912320415, Principal Wad Medani MST, Wad Medani, Sudan.

Abstract:

This review article is intended to highlight the importance of scientific writing and journal publications for career development of university students, postgraduate students, medical and university staff. Scientific writing facilitates the exchange of knowledge and experience.

The authors reviewed the literature and summarized the important practical hints and tips to aid producing a publishable scientific material.

The authors concluded that scientific writing is an art which is mastered by practice, perseverance and the will to continue.

Introduction:

Scientific writing for medical practitioners and academic staff is a means for documentation, continuous medical education (CME) and professional development (CPD). The issue is complimentary for the concept of evidence based medicine (EBM). Scientific writing is an important teaching method and assessment tool for both undergraduate, postgraduate university students and academic university staff. ^(1, 2)

Since prehistoric ages and after discovery of the alphabet to the present age of electronic media, the exchange of knowledge and experience depends largely on documentation. Scientific writing is a well-established means of qualification and an assessment tool for career promotion in almost all universities and examinations bodies all over the world. There is an old dictum that states (publish or perish). ^(1, 2)

All postgraduate institutes, examinations bodies, publishing houses and reputable scientific journals have their own rules, regulations and guidelines for submission of different scientific material forms. That is why it is advisable for anyone considering publication to enquire about these rules, regulations and guidelines prior to submission of his/her work. ^(1, 3)

The objective of this review article is to highlight the importance of scientific writing and journal publications for medical practitioners, academic staff and postgraduate medical students and to give practical hints and tips that facilitate and encourage their

EDITORIAL

participation in this field. In spite of meticulous search in both classical and E- e literature for recent similar publications, very scarce publications were encountered. In all forms of scientific writing there is a common structure or skeleton composed of the following:

- Title
- Author/s
- Abstract and Keywords
- Introduction / Background and Literature Review
- Objectives: (general and specific)
- Materials (Patients) and Methods
- Results and Analysis
- Discussion
- Conclusion and Recommendations
- References

In this article these structural or skeleton components will be addressed separately and in order.

Title:

Title should be comprehensive, consistent, representative, relevant to the study and attractive to reviewers and readers. Many institutions and journals limit the number of characters used in the title.

Author/ Authors:

Single authorship is looked at with low impact in contrast to multi authorship which also expresses team work. Each author should state his own contribution and impact in the study.

Abstracts and Keywords:

Abstracts should be representative of the study skeleton and preferably structured (objective, method, results, conclusion and recommendations) abiding with the rules, guidelines and regulations of the targeted publishing body or institution. Keywords are to be provided when required.

Introduction /Background and Literature Review:

The background is the literature review in the introduction which should be relevant to the title with an updated review of the topic. Review and summarize the literature in your own words. Avoid plagiarism. Honesty is the keystone to academic work and success. Gracefully tailor the literature review to state justifications of the study including the problem situation.

Sometimes the study addresses a typical published work and is justified for convincing reasons e.g. environment, sample size etc.

The objectives of the work or study should be stated clearly at the end of this stage.

EDITORIAL

Objectives:

The general objective represents and is based on the title. Specific objectives should be well defined in the present tense. Identify the purpose of your project, expressing originality and significance. Set appropriate goals and maintain strong organization.

Materials (Patients) and Methods:

If patients or animals or sensitive materials are involved in the study, written consent and ethical clearance should always be obtained from eligible authorities or patients or their guardians.

The type of the study e.g. hospital based, community based, cross sectional, clinical trial, case controlled, randomized, retrospective, prospective cohort should always be described together with the methods used in the study. Methods should be clear and the reader should be able to understand how the study was conducted and could be repeated by other researchers. Settings, institutions, place, facilities, date and study sample size, sample selection, duration should always be described.

In clinical studies it is always important to describe whether the study was controlled or uncontrolled and the criteria for inclusion and exclusion stated. All drugs, equipment and appliances should be clearly described (model, manufacture date etc.).

Statistical and analytical methods used must be shown clearly and explicitly. Methods of data collection should be described and explained. The role of the investigator/s should be explicit.

Results and Analysis:

Collected data should be analyzed. Results should be presented in acceptable, informative and suitable forms that clearly show the outstanding results and findings e.g. percentages, tables, graphs etc. Tables and figures should be numbered in the order they appear in the text and referred to accordingly. Table and figure Information should not be repeated in the results section and should highlight significant results only. Legends for figures and tables should be informative and precise. Analyze your results and judge evidence.⁴ The proper use of tenses (past in the method and results, passive tense, etc.) is a must.

Tables should be foot noted with statistical method of analysis of variables and verification.

Discussion:

Discussion should be based on the study results. Results and findings should be discussed with regard to similarities or differences in comparison with previous similar studies. At this stage authors should prove how much they have benefited from the literature review or background. Discuss findings and produce publishable results. Think and write critically and coherently.^(3, 5) The scientific writing style is composed of clear short sentences and short paragraphs.⁽⁵⁾

EDITORIAL

Tables and figures are considered as part of the text and should be referred to in numerical order as they appear in the text. It is advisable to use simple, clear and short sentences. Use of subjective language should always be avoided and discouraged.^(4, 5)

Conclusions and recommendations:

Conclusions and recommendations should be based on and drawn from the results and should be relevant to the study. Conclusions should be concise, clear and informative. Many reviewers are busy and start looking at the text by reading conclusions.⁽⁵⁾

References:

References should be adequate and updated with some very recently published references. References should be listed according to the institution regulations in numerical order (Vancouver Style) or in alphabetical order. E-literature reference should appear according to its origin.

In Conclusion, scientific writing is an art which is mastered by practice, perseverance and the will to continue. Scientific writing facilitates the exchange of knowledge and experience and hence the old dictum should read (publish to survive).

Acknowledgement:

The authors would like to acknowledge the invaluable comments and ideas of Professor Osman Khalafalla and Professor Omar Ahmed Mirgani regarding the final version of this review article.

References:

1. Elmustafa, O.M. The Performance of Candidates in the Examination of the Otorhino Laryngology Specialty, Sudan National Medical Specializations Broad. GJHS December 2013, Vol 9 (2), page 88-96.
2. Elmustafa, O.M. Medical Scientific Writing and Conference Presentations. Proceedings of the 4th National Seminar, Sudan ORL, H&NS Society, November 2008, Khartoum, Sudan.
Proceedings of the 2nd Yemeni International ORL H&NS Society Conference, 7-9 April 2009, Sana'a, Yemen.
3. Elmustafa, O.M. Sudanese ORL Research and Scientific Publications. Proceedings of the 6th International Conference, Sudan ORL, H&NS Society, 25-26 February 2015, Khartoum, Sudan.
4. Lovittes, B. and Wert, E. (2009), Developing Quality Dissertations in the Social Sciences: A Graduate Student's Guide to Achieving Excellence. Sterling, VA: Stylus Publishing.
5. www.ed.ac.uk/studying/postgraduate. How to Write a Good Postgraduate Research Proposal, the University of Edinburgh.