THE JOURNAL OF OBSTETRICS AND GYNECOLOGY OF INDIA

The Journal of Obstetrics and Gynecology of India (May–June 2018) 68(3):151–154
https://doi.org/10.1007/s13224-018-1133-5

EDITORIAL

The Art and Craft of Making a Draft: Writing a Good-Quality Scientific Paper!

Suvarna Satish Khadilkar[1]

Received: 4 May 2018 / Accepted: 4 May 2018 / Published online: 21 May 2018

About the Author

Dr. Mrs. Suvarna Satish Khadilkar is the Editor-in-chief of this journal. She is currently working as Consultant Gyne-Endocrinologist, Bombay Hospital Institute of Medical Sciences and Medical Research Centre, Mumbai. In the past she worked as Associate Professor and Unit Chief at JJ Group of Hospitals and Grant Medical College [GMC], Mumbai, and thereafter in the capacity of the Professor and Head in Department of Obstetrics and Gynecology, Government Medical College, Kolhapur, Maharashtra. She has been an undergraduate and postgraduate teacher and examiner, Mumbai University and Maharashtra University of Health Sciences. Pursuing her interest in endocrinology, she acquired Diploma in Endocrinology from the prestigious University of South Wales, UK, and has been appointed as a recognized teacher in endocrinology in University of South Wales. She is the Treasurer of FOGSI. She has held many prestigious positions like President of Indian Menopause Society, Chairperson of Reproductive Endocrinology Committee of FOGSI, President, Association of Medical Women in India, Mumbai. She is currently the librarian of Mumbai Ob–Gyn Society. She has published six text books and more than 70 articles at national and international levels. She is recipient of 30 awards for her research work including the Young Scientist Award.

Abstract Writing a good-quality scientific paper is an art. The art and craft of making a draft of a good scientific paper are not simple! The research conducted must be original and should help clinicians to improvise the way they practice. Work should have relevance to women's health and should be significant enough to create an impact on health care. Will, skill, and drill are the three components of art of quality scientific writing. These are built on the sound foundations of science and integrity of the researcher. The key to master this art is to keep on doing good work and writing consistently good quality articles. This editorial will give some insights into how to write a good quality scientific paper.

Medical scientific writing is an art! The key to master this art is doing good research work and writing consistently good quality articles. While writing a scientific research

Prof Suvarna Khadilkar MD DGO FICOG, CIMP, Diploma in Endocrinology (UK) is Editor in Chief of Journal of Obstetrics and Gynecology of India, and Treasurer, FOGSI, she is Consultant Gyneendocrinologist, Bombay Hospital & Medical Research Centre, Mumbai, Former Professor and Head, Dept of ObGyn, RCSM, Government Medical College, Maharashtra and Asso. Prof. & Unit Chief Grant Medical College and Cama & Albless hospital, Mumbai.

✉ Suvarna Satish Khadilkar
suvarnakhadilkar@yahoo.com;
suvarnakhadilkar2@gmail.com

[1] Consultant Gyne-Endocrinologist, Bombay Hospital & Medical Research Centre, Mumbai, India

paper, you must first ensure that the research you performed has originality and a potential to be of help. Your work should have relevance to women's health and should be significant enough to create an impact on health care. Will, skill, and drill are the three components of the art of quality scientific writing. These are built on the sound foundations of science and integrity of the researcher. This editorial will give useful tips towards writing a good quality scientific paper.

Before you put your pen to paper, ask yourself, why do I want to write up this research work? One should not write out of compulsion, just because one ought to!

Why Does One Write?

There are many reasons as to why a researcher would want to write and publish research papers. One wishes to share research findings with other scientific colleagues, something new with the hope of improving health care. There can be other reasons like the desire to get peer recognition, fierce competition, sanctioning of funds, promotions, get a job or to continue with your job.

How to Start Writing?

To get started, you must choose the research question or form a hypothesis that has not been discussed or published before. There is no point in just confirming the facts which have been already proven many times before. The choice of the journal depends upon the nature of the research material and the journal's inclinations. You should familiarize with the target journal where you are submitting your paper. Thoroughly study the instructions to authors. Analyzing various papers published in the proposed journal will be of great help. By doing this, you will be able to understand whether the work done by you fits into the priorities of the journal.

Do's and Don'ts of Medical Writing

Choose the type of article carefully. Where does your manuscript fit? Is it worthy of a full original article, can it be presented as a short communication, is it indeed a technical report, and so on. From the editorial standpoint, authors tend to mix reviews with original articles and often submit minor observations as full-length manuscripts. Original articles must have originality. Viewing your manuscript as someone else's work will quickly clarify its true potential! It may be noted that case reports submitted purely for its rarity may not be accepted, because it may be rare for the author, but it may not be so for the journal. Case reports without challenges or relevance for the practical management are less likely to be accepted.

If you face the problem of poor language skills, take help of language experts and correct the spellings and grammar to perfection. Make sure that references are comprehensive, accurate and strictly as per journal style. Avoid careless mistakes. I personally read my own article again and again and then give it to my scientific colleagues. It is but natural that, you would pick out mistakes of others rather easily! Make use of this quality to your benefit and correct even smallest errors, as suggested by them.

It is imperative that all the authors participate in writing and reviewing the manuscript and confirm the order of authorship. Voracious readers make good writers. If you read many well written articles, it will help you develop a good original writing style of your own. Before submission, it will be a good idea to get a review done by a skillful writer. Submit your article only after you are satisfied with the draft of manuscript. Complete all the formalities for submission meticulously. Similarly, when your paper is out for revision, ensure that you respond to all queries carefully and comply with all required revisions to the satisfaction of reviewers.

How to Craft the Draft?

I am yet to know an author who has written his first and final draft without any revision! If someone says crafting a draft is easy, he is not doing it right! The right way to make a draft is to first write, and then review and revise, review - revise, review- revise, review-revise, as many times as required.

Let us now understand various sections of a paper and how to write these in a standard format of headings. "IMRaD" is a commonly cited acronym for these sections. (Table 1) [1]. The order in which they appear is universally same but the order in which they are written, can be variable. Some researchers start writing results section first, followed by the discussion and abstract. The title is written last, as it reflects what the paper is actually about. Some others prepare notes while reviewing the literature after a research question is formulated, which is useful for writing discussion section [2].

"Title and Keywords"

The title will determine whether paper will be read or not as it is the first thing a reader (and the editor) will see. It is the most widely read part of the manuscript and is visible on all the sites and searches. Therefore, it is very important

Table 1 Order of section headings as they appear in manuscript

Title
Keywords
Abstract
Introduction
Aims and Objectives
Materials and methods
Results and Observations
Discussion
Conclusions
Acknowledgements
References

that author writes it last. Authors should avoid lengthy titles, stick to the journal rules and avoid abbreviations. The title should be catchy as it makes the first impression. However, one should not forget the scientific nature of the article and should stay way from titles which would resemble the headlines of a newspaper or a magazine.

Choose key words which will enable easy and wide search of the subject on various search engines, for better visibility of your article and for easy referral by other researchers.

"Abstract"

It is second most widely read section of the manuscript and the most critical part of the paper. It should give the gist of the study in a structured format. State the main objectives of the study, summarize most important results, state major conclusions and significance of the study. Avoid giving any acronyms. One very important tip to write a very good abstract is to keep revising till it is flawless [3]. The first two or three lines must generate enough interest to continue reading. Abstract should be such that readers would get an idea of what you are trying to prove by this research. Readers will feel like reading through the entire article and those who are doing research on the similar topic may cite your work. Therefore, the Abstract must be written after completing the entire manuscript. Ensure that important points made in the main manuscript are included in the abstract. It is equally important that whatever is written in abstract should be reflected in the main text of the manuscript.

'Introduction'

First few lines of introduction are very important and depict what is known on the subject. Introduction can be a single large paragraph or two to three small paragraphs. After giving a brief background on the subject narrating the key papers which have already been published on the subject, give your research question or the hypothesis. Build the case for why your study is important or necessary; stating precisely which gap in the current knowledge you are trying to bridge.

"Aims and Objectives"

Aims are general sentences describing main intentions of the research. These emphasize what is to be accomplished. Objectives are more specific statements about target to answer your research questions, a specific list of tasks elaborating what precisely you wish to study to fulfill your aim. Remember these aims and objectives well because these should reflect in conclusions, summarizing how and if aims were accomplished!

"Materials and methods"

It is good to begin writing when the experiment is still in progress. Methods should be detailed enough so that it can be repeated by others. Always quote previously published methods wherever appropriate. As described in Table 2, give all the details in the section on methodology including animal and human experiments information. You may use descriptive sub-headings if necessary. Ensure that there are no pitfalls in the methodology and design. The study period, nature of investigation, and ethics committee approval should also be mentioned in this section. Flow chart of the study methodology is recommended. From the editor's view point, this section turns out to be most heavily criticized by reviewers. Young writers should pay special attention to the accuracy of this section.

"Results"

Results should be brief with a clear message. One must realize that they are most difficult to comprehend, hence should be presented in a simplified manner. Data need to be relevant to the research question. Observations other than those relevant to the question should be included only if it makes your stand on the question stronger. Tables and figures should comply with journal style. Do not repeat matter included in tables as text, quote the table and give only the interpretation in simple words. Mention what expected primary and secondary outcomes could actually be achieved.

Table 2 Points to be covered in "Materials and methods"

Study period and type of institute
Subjects and control of the study
Type of the study
Ethical committee approval
Protection of human and animal rights has been taken care of
Study design, inclusion and exclusion criteria
Estimated sample size
Power calculation or rational of sample size
Actual steps of methods
Validation of research tool, biases if any
Blinding of observers done or no
Funding sources and conflicts of interest if any
Proposed Primary outcome
Proposed Secondary outcome
Statistical analysis and the tools used

"Discussion"

This section deals with the interpretation and comparison of your results with other authors' published work and highlights the significance of what your study has achieved in the field. It should discuss reasons as to why the results of your study match with others or do not match with others. Try and answer the question posed in introduction, explain what is new without exaggerating or boasting about your results. Do not repeat the results in the discussion section. If there is a lot of literature available on the subject, it is not necessary to quote each and every paper but group them in sections, be selective based on the points they make. Tabulated comparisons are easy for the readers. In this section, you should also discuss the strengths and the weaknesses of your study and include comments regarding the sample size, results and methodology.

"Conclusions"

Summary and interpretation of your work should be presented here. Go back and read the aims and objectives you had formulated and write here whether or not your aims were fulfilled, giving reasons. A clear take-home message should appear in this section with a mention of how it will improve the current practice. Recommendations emerging out of your research can be included in this section.

"Acknowledgements"

Do not forget to acknowledge duly all those who have helped you with the project but do not qualify as authors.

"References"

This is the least read section of the paper but is most pertinent to the serious researchers. References should be relevant, recent and accurate. Each reference cited in text must appear in the reference list, and vice e versa. Be highly selective, and it is strongly recommended that you read the references completely before quoting and listing them. Making a reference list in current times has become easy as we have many reference management softwares, which help arrange your references as per the journal style. Some journals accept only Vancouver style while some want Harvard style. So quoting them in text as per journal style is very important. Ensure that you do not misquote any reference. Some journals make full texts of the references available to the reviewer, so accuracy is vital.

A reference list and a bibliography are similar yet different. They're both composed of entries arranged one after the other. A bibliography usually contains all the sources cited in a paper, but it may also include other papers which author may have referred to but not cited in the text. The author includes these in the list because he feels they are useful to readers.

You should write in such way that you will be remembered forever for your work!

Learn the art and craft of making a draft with skill, will, drill, honesty and integrity!! Wishing you all the best for successful medical writing experience,

References

1. American National Standards Institute/National Information Standards Organization. Working Group: Z39 Subcommittee 26. Preparation of Scientific Papers for Written or Oral Presentation. New York, NY: The Institute; 1979.
2. Alexandrov AV. How to write a research paper. Cerebrovasc Dis. 2004;18(2):135–8.
3. Mack CA. How to write a good scientific paper: title, abstract, and keywords. J Micro Nanolithogr MEMS MOEMS. 2012;11(2):020101.