

How to write a good scientific paper for publication in a journal

INTRODUCTION

There is inadequate or total lack of training in medical manuscript writing in medical schools and institutions in resource poor settings. As a result, students develop reluctance to write until necessity makes it mandatory for them to write their dissertations, theses and projects. Requirements for promotion in academic careers also force medical professionals to write.

This editorial aims at guiding the prospective writer through the basic steps and suggestions for manuscript writing.

STEPS IN MANUSCRIPT WRITING

The title is one of the most visible parts of the manuscript. An attractive title will draw immediate attention of the reader. The following are examples: "Myomectomy in pregnancy,"^[1] "breast cancer in pregnancy: Case report and review."^[2]

Your title might also state the objective of your study. The following are examples: "Baseline study of pregnant women's knowledge of treatment to prevent mother to child human immunodeficiency virus transmission in resource limited setting"^[3] and "practice of antenatal clinical breast examination as a method of early detection of breast cancer by healthcare providers in low resource setting."^[4]

The title may sometimes give the highlight of your study. The following are examples: "Seroprevalence of syphilis in women attending antenatal clinic at Abia State University Teaching Hospital, Aba, Southeast Nigeria"^[5] and "lessons learned from the outcome of bloodless emergency laparotomies on Jehovah's Witness women presenting in the extremis with ruptured uterus."^[6]

Your title must be concise, accurate and readable. Avoid abbreviations in your title as they could have different meanings in different fields.

Acronyms, initialism and Roman numerals should also be avoided in your title.

Introduction

The introduction should provide context or background to the study (that is, the nature of the problem and its significance).

State the specific purpose or research objective or hypothesis tested by the study or observation.^[7] Do not review the literature in this section although a brief overview of publications might be useful to establish relevance of the question.

Your introduction should explain the rationale or why the study is important. The introduction should conclude with a direct statement about the purpose of the study – stating why the study was done and what is to be learned from the study. It should be short and simple.

Methods

Methods should include the setting for the study, the design of the study, the subjects, the treatment or interventions, and the type of statistical analysis.^[8] You should describe how your research was done, materials used, study population and the methods or procedures used. Write the methods section in the past tense. State clearly that your study was retrospective or prospective, *in vivo* or *in vitro*, or performed on human or animal subjects.

You should identify the statistical methods used and the computer program and the version. Include the name and location of the software package.

Results

Present your result in the sequence in the text, tables and illustrations, giving the main or most important findings first. Do not repeat all the data in the tables or illustrations in the text; emphasize or summarize only the most important observations. When data are summarized in the results section, give numeric results not only as derivatives (for example, percentages) but also as the absolute numbers from which the derivatives were calculated, and specify the statistical methods used to analyze them.^[7]

Make sure each table is titled, numbered and typed on a separate page. Only standard, universally understood abbreviations should be used. Figures and graphs should be self-explanatory.^[8]

Discussion

In this section, you should discuss the major findings of your study. State the significance of your results. You may discuss differences between similar studies.

Point out the limitations of your study, and give implications, including further studies that are recommended.^[8] The following outline adapted from Docherty and Smith^[9] is one

Access this article online

Website:

www.jomip.org

DOI:

10.4103/9783-1230.139140

Quick Response Code



way of organizing the discussion section. Each of the five points would usually rate a paragraph.^[10]

1. A brief (no more than one or two sentences) restatement of the principal findings
2. A balanced analysis of the strengths and weaknesses of the present study
3. Relation of the study's strengths and weaknesses to other reports, stressing especially any differences in results
4. Suggestions of potential mechanisms of the observations and the study's meanings for researchers, clinicians, or policymakers
5. Questions raised by the findings and their implications for additional research.

References

Follow the rules established by the International Committee of Medical Journal Editors.

Vancouver, "numbered" style is recommended. It is also known as the uniform requirements for manuscripts submitted to biomedical journals.^[7] Use the Index Medicus abbreviations for journal titles. Try and cite only the references that are vital to your study. Cite the primary rather than a secondary source. Each reference should be numbered and listed in the order it was cited in the text. References should not exceed 20–25 in number and should be updated and limited to the last decade.^[8]

Stephen Onwere

Department of Obstetrics and Gynaecology, Abia State University Teaching Hospital, PMB 7004, Aba, Abia State, Nigeria.
E-mail: stephenonwere@yahoo.com

REFERENCES

1. Okoro O, Onwere S. Myomectomy during pregnancy. *Pak J Med Sci* 2007;23:771-3.
2. Onwere S, Okoro O. Breast cancer in pregnancy: Case report and review. *J Obstet Gynecol East Cent Afr* 2008;20:1-3.
3. Onwere S, Okoro O, Chigbu B, Kamanu C, Aluka C, Waboso P. Baseline survey of pregnant women's knowledge of treatment to prevent mother-to-child human immunodeficiency virus transmission in a resource limited setting. *Asian Pac J Trop Med* 2008;1:65-8.
4. Onwere S, Okoro O, Chigbu B, Onwere A. Practice of antenatal clinical breast examination as a method of early detection of breast cancer by health care providers in a low resource setting. *Arch Gynecol Obstet* 2008;278:115-7.
5. Onwere S, Okoro O, Ezirim EO, Chigbu B. Seroprevalence of syphilis in women attending antenatal clinic at Abia State University Teaching Hospital, Aba, South East Nigeria. *J Obstet Gynecol East Cent Afr* 2006;19:21-4.
6. Chigbu B, Onwere S, Kamanu C, Aluka C, Okoro O, Feyi-Waboso P, *et al.* Lessons learned from the outcome of bloodless emergency laparotomies on Jehovah's Witness women presenting in the extremis with ruptured uterus. *Arch Gynecol Obstet* 2009;279:469-72.
7. International Committee of Medical Journal editors uniform requirements for manuscripts submitted to biomedical journal ICMJE. Available from: <http://www.icmje.org>. [Last retrieved on 2014 May 31].
8. Sheiner E, Ludwig H. The right way to write. *Arch Gynecol Obstet* 2009;279:103-4.
9. Docherty M, Smith R. The case for structuring the discussion of scientific papers. *BMJ* 1999;318:1224-5.
10. A Guide to Writing for Obstetrics and Gynecology. The American College of Obstetricians and Gynecologists. Washington, DC: American College of Obstetricians and Gynaecologists.; 2007.

How to cite this article: Onwere S. How to write a good scientific paper for publication in a journal. *J Med Investig Pract* 2014;9:53-4.
Source of Support: Nil, **Conflict of Interest:** None declared.

"QUICK RESPONSE CODE" LINK FOR FULL TEXT ARTICLES

The journal issue has a unique new feature for reaching to the journal's website without typing a single letter. Each article on its first page has a "Quick Response Code". Using any mobile or other hand-held device with camera and GPRS/other internet source, one can reach to the full text of that particular article on the journal's website. Start a QR-code reading software (see list of free applications from <http://tinyurl.com/yzlh2tc>) and point the camera to the QR-code printed in the journal. It will automatically take you to the HTML full text of that article. One can also use a desktop or laptop with web camera for similar functionality. See <http://tinyurl.com/2bw7fn3> or <http://tinyurl.com/3ysr3me> for the free applications.