



PAHO Guide for Writing a Final Report & Abstract (including keywords)¹

PAHO/WHO Communicable-Disease Research Program

Communicable Disease Unit

Health Surveillance and Disease Management Area

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At the end of the time period allotted for completing the research, the investigator needs to prepare the final report on the project. To be accepted by the Program, the final report must be presented *in the form of a scientific article*. The completed manuscript *should not exceed 20 pages* (either letter-size or A4). The pages should be typed on only one side, and either double or triple spaced, so that each page has no more than 25 well-spaced lines, with top and bottom margins of around 4 cm. Each line should have a maximum of 70 characters and the right and left margins should measure at least 3 cm. The final report should be submitted electronically as a Word file and sent via e-mail to Dr. Zaida Yadón, PAHO Communicable-Disease Research Program, yadonzai@bra.ops-oms.org.

1. Abstract and Keywords

The investigator should prepare an abstract of the report that does not exceed 250 words in length. The abstract should clearly indicate: (a) the study's objectives and goals; (b) the location and date of the research; (c) the basic methods and procedures used; (d) the main results; and (e) the main conclusions. New and important findings should be emphasized. No information or conclusion should be included that does not appear in the text. The tone should be impersonal and the author should avoid using abbreviations, referring back to the original text or citing references.

The principal investigator has the option of attaching the more detailed manuscript of the research project to the scientific article, in which case he should still follow the above recommendations, incorporating more information (tables and graphs) and even annexes. The investigator should include a list of specific keywords at the end of the abstract.

However, it must be emphasized that even if a more detailed report is included, **in order for the results of the research to be evaluated and the final disbursement made, the manuscript must be submitted in the form of a scientific article** that adheres to the standards and procedures described above.

2. Final Report: Body of the Manuscript

The final report describes the findings of the research and accordingly should have the form and content of a scientific article. A scientific article is understood to be a written report that describes original research findings. By convention, scientific articles are organized to meet the requirements of a valid publication; i.e., they must have certain specific and clearly differentiated parts. Current practice calls for the following component parts to be included: *introduction, materials and methods, results, and discussion*. This is known as the 'IMMRAD' format.

2.1 Introduction

The purpose of the introduction is to provide sufficient background for the reader to understand and evaluate the findings of the study without needing to consult earlier publications on the subject. A good introduction should observe the following rules: (a) Begin by stating as clearly as possible the nature and scope of the problem being investigated; (b) review relevant publications in order to orient the reader; (c) briefly describe the research methods, including, if deemed necessary, the reasons for choosing those particular methods; (d) list the principal results of the research; and (e) state the principal conclusion or conclusions suggested by these findings.

Sections *a* and *b* of the introduction can include the problem statement, the research objectives and goals, and the central components of the theoretical framework. However, the discussion of the underlying concept can also be included as a separate section between the introduction and the methods if the study is the kind that warrants that kind of treatment.

¹ Criteria taken from Robert A. Day, *How to Write & Publish a Scientific Paper*. Phoenix: The Oryx Press; 1988.

2.2 Methodology

This section contains a broader discussion of the key elements of the research design that were outlined in the introduction. The methodological aspects of the set of hypotheses or key questions that motivated this research are described, along with the technical procedures utilized to conduct the research (e.g., selecting the study universe, sample, units of analysis and observation, scheduling, data sources, training for groups, instruments for data collection, etc.). For research that required special laboratory tests or materials and various supplies (chemicals, biological substances, etc.), a list of these items should be included as well.

2.3 Results

This section is where the quantitative or qualitative data is presented. Although it is the most important section, it is often also the shortest, especially if it is preceded by a methodology section and followed by a well-written discussion. The results must be stated clearly and simply because they represent the new knowledge that is being contributed.

This section includes any tables, figures, and graphs, together with brief comments. It is important to consult appropriate references to find out how to prepare useful tables and graphs.

2.4 Discussion

The main purpose of the discussion is to talk about the relationship between the results that were found and the original ideas or assumptions. The findings are discussed in light of the objectives, questions, and hypotheses that were formulated at the outset.

A good discussion has the following essential characteristics:

- a) It should present the principles, relationships, and generalizations indicated by the results. The results should be stated, not recapitulated.
- b) It should note any exceptional findings or lack of correlation and review any unresolved issues. And, it should strenuously avoid the dangerous path of trying to conceal or alter data that do not fit.
- c) It should show how well the findings or interpretations agree (or disagree) with the questions or hypotheses that were originally formulated. In addition, it should talk about how well these results and interpretations agree with other work published previously.
- d) It should state the theoretical implications of this work and its possible practical applications.
- e) It should summarize the tests and evidence that support each conclusion.

The discussion should conclude with a brief statement regarding the significance of the research, keeping in mind the following recommendation: "When describing the meaning of your small piece of truth, keep it simple. The simplest statements can contain the greatest wisdom, while verbose language and fancy technical jargon are often used to convey very superficial ideas."²

3. Bibliographic References

References are essential to identify the original sources of concepts, methods, and techniques taken from earlier research, studies, and experiments; to support the facts and opinions expressed by the author; and to orient the reader who wants to find out more about the topics discussed in the document.

All references should be cited in the text either as footnotes or endnotes, using consecutive numbers. The references should be listed consecutively according to order of appearance in the text.

Bibliographic sources consulted but not cited in the text should be listed alphabetically in a bibliography by author's last name. These should be listed on separate pages at the end of the article and should use the standard format for citations of journal articles, conference documents, books and monographs, unpublished articles, theses, and abstracts.

² Robert A. Day, *How to Write & Publish a Scientific Paper*, *op. cit.*, p. 45.