Effective Methods in Writing Results, Discussions, Acknowledgements, References, Tables, and Figures

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Results

One of the most commonly found mistakes in this section is that authors occasionally provide only data and no results, or vice versa.¹ The ‘Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals’ (ICMJE Recommendations) suggest stating the main or most important findings at the beginning, and presenting all results in a logical sequence in the text, or by using tables and figures. It is important not to repeat in the text the content presented in the tables and figures, which are used to save space. Authors should emphasize only the most essential points.

The ICMJE Recommendations also advise authors to provide numeric results as absolute numbers as well as percentages. Authors should try to use graphs instead of tables if there are a large amount of data, specify the statistical methods used for analysis, and avoid duplication of data in graphs and tables.

Discussion

This section should begin with a statement refocusing readers on the main objective(s) and finding(s) of the study using statements such as “In this study, we set out to determine whether ...” Authors should emphasize the new and important aspects of the study and conclusions obtained, and compare and contrast the results with those of previous studies, thereby “discussing” the results. It is important not to repeat the data given in the Introduction or Results section.

In accordance with the ICMJE recommendations, authors should also state the limitations of the study, such as “the results are appropriate only for a small patient population studied, not all patients at large.”¹

Acknowledgments

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References

Although this is an extremely important section, it is often overlooked and carelessly written by authors, resulting in errors and inaccurate information.

The first edition of the ICMJE Recommendations (formerly known as the Uniform Requirements) in 1979 was created based on discussions concerning reference formats, one that had been raised many times by journal editors of “why journals could not agree on standards for manuscripts, particularly formats for bibliographic references.”² The format recommended by the ICMJE is based on the American National Standards Institute (ANSI) adopted by the National Library of Medicine, and has served as a standard format for many biomedical journals.

Authors should primarily include references to key original research papers because they serve more effectively for comparing and assessing results than having an extensive list of references that include old and irrelevant reports. It is also better to avoid using abstracts as references. Manuscripts that have been accepted but not yet published can
be included as references, in which case these should be designated as “in press” or “forthcoming”. However, manuscripts that have been submitted but are not yet accepted cannot be used as references. When referring to information that is not yet published, this should be designated as “unpublished observations” or “unpublished data”.

The ICMJE Recommendations suggest that, whenever possible, citing a personal communication as a reference should be avoided. However, since 1997, in cases where personal communication is absolutely necessary as a reference, authors have been asked to provide the date of communication and written permission from the person whose personal communication is cited. Authors should keep records of personal communications even beyond retirement to serve as supporting or verifying documents when needed.

According to the style recommended by the ICMJE, references should be numbered consecutively in the order they appear in the text, using Arabic numerals in parentheses. However, some journals ask for references to be listed alphabetically, in which case authors should follow the specified instructions. References cited only in legends should be numbered in the text on their first mention.

Tables

Using tables instead of text is an effective way to present quantitative data, emphasize important information, and reduce the length of the manuscript. Accurately prepared tables enable readers to interpret data easily without reading the text. Tables should be prepared double-spaced on separate pages, have a concise caption usually in the form of a short phrase at the top of the page, and be numbered consecutively.

When creating tables, authors should use as few internal horizontal lines as possible and not use vertical lines. Each column should be given a short or abbreviated heading and explanations should be placed in the footnote. Footnotes can be in the form of phrases or sentences and should be identified using symbols such as *, †, ‡, §. Other symbols that can be used are as follows: ||, ¶, **, ††, ‡‡, §§, ||||, ¶¶, etc.

Figures

Journals usually specify the exact format of the electronic files for figure images so it is important for authors to follow the Instructions to Authors. When submitting digital images, authors must adhere to the required size and resolution. Letters, numbers and symbols should be clearly printed so that they will still be legible even after reduction for publication.

When using photographs of people, these must be processed to make the person unidentifiable and even when they are, written permission should be obtained if possible.

When using figures from previously published articles, it is important to acknowledge the original source and submit written permission for reproduction from the copyright holder. Detailed explanations of figures must be presented in the legends, which should be written on a separate page.

Units of Measurements and Abbreviations

Metric units should be used unless otherwise specified in the Instructions to Authors of the target journal. It is recommended to use only standard abbreviations. In principle, abbreviations should not be used in the title, except for exceptional cases such as when using DNA or RNA. Abbreviations should be spelled out on the first mention, followed by the abbreviation.

Summary

When preparing a manuscript for submission, the overall presentation of the essential components of a paper is as important as the content of the report, in addition to the theoretical and ethical aspects. Since journals receive large numbers of papers to consider for publication, authors must ensure that the essential components of a paper are complied with and that there should be no mistakes or inaccuracies in the technical composition of the paper.
References