Attachment #6 50+ (and counting) Tips to Writing a Good Paper

Department of Physical Therapy

1. All manuscripts should contain the following, organized in the order listed below, with each section beginning on a separate page:
   - Title page
   - Abstract
   - Text
   - References
   - Tables, each on a separate page
   - Illustrations with legends

The only difference among manuscript types is how text (body of manuscript) is managed.

2. All pages from Abstract (page 1) through illustrations should be numbered. Variations from this may be required for submission of a thesis. Check the Texas State Theses and Dissertation handbook for specific requirements for thesis preparation.

TITLES

3. Titles should be brief within descriptive limits (a 16-word maximum is suggested).

ABSTRACTS

4. A comprehensive abstract of 75 to 300 words is suggested. The title should appear at the top, skip two lines, and begin the abstract. It should be structured as the body of the manuscript is and should succinctly summarize the major intent of the manuscript, the major points of the body, and the author's results and/or conclusions. No references should be cited.

5. Suggested structures for abstracts:

   **Literature Reviews**
   Objective - What was the purpose of the review?
   Data Sources - What sources did you search to find the studies you reviewed? You might include key words and years searched.
   Data Synthesis - Summary of the major themes, organized by themes not authors
   Conclusions/Recommendations - Advice and clinical applications of the information

   **Research Report**
   Objective - Problems or need for the study
   Design and Setting - How was the study set up? Where did it take place?
   Subjects - Characteristics of the subjects
   Measurements - What was being measured? What types of tests were used? How were the subjects distributed within the study?
   Results - Of the tests and measurements
   Conclusions - Major conclusions particularly related to theory and clinical application of the information

   **Case Reports**
   Objective - Problem or need for the case to be presented
   Background - On the particular injury or illness
   Differential Diagnosis - What was it or what could it possibly have been?
   Treatment - What was done for it? What is normally expected for this condition?
   Uniqueness - What was different from the expected, or was it the same?
   Conclusions - Clinical applications of the information
6. An abstract is not to be used as the introduction; the abstract is a summary of the entire manuscript, while the introduction develops and proposes the manuscript's problem or purpose.

MANUSCRIPTS

7. In a scientific manuscript the introduction serves two purposes: to stimulate the reader's interest and to outline the reason for the study, that is, the controversy or knowledge gap that prompted the study.

8. Begin the text of the manuscript with an introductory paragraph or two in which the purpose or hypothesis of the article is clearly developed and stated. Tell why the study needed to be done or the article written and end with a statement of the problem.

9. The introduction is not the place for great detail. Highlights of the most prominent works of others as related to the subject may be appropriate for the introduction, but a detailed review of the literature should be reserved for the discussion section. Identify and develop the magnitude and significance of the controversy or problem with brief specific statements (referenced, of course). Pointing out differences among authors' results, conclusions, and/or opinions often does this. Remember to keep the detail in the discussion.

10. In the introduction and discussion sections, it is appropriate to use transition sentences to summarize points and link to the next point. Try not to leave the reader hanging, instead create a smooth flow of ideas.

11. The body or main part of the manuscript varies according to the type of paper you are writing; however, regardless of the manuscript type, the body should include a discussion section in which the importance of the material presented is discussed and related to other pertinent literature. Liberal use of headings, subheadings, charts, graphs, and figures is recommended.

12. The term "methods" is more appropriate than "methodology". "Methodology" suggests a study of methods, whereas "methods" suggests a description of methods used, which is what the section is.

13. Begin with a description of the experimental design, which will serve as a road map to the entire section. Follow with descriptions of subjects, instruments, procedures, and statistical analysis. Confusion is often introduced when authors combine the instruments and procedures sections. Describe the instruments used in the instrument section, but describe how they were used in the procedure section.

14. The methods section should contain sufficient detail concerning the methods, procedures, and equipment used so that others can reproduce the study.

15. Methods used by others to study problems such as yours should be reviewed and referenced in your paper. Reference the methods of others as well as reliability and validity information in the methods section. The pros and cons of various methods and why you chose one over another should be discussed and referenced in the discussion or introduction.

16. IRB approval and informed consent procedures should be stated formally in the methods section of the manuscript.

17. Writing results is similar to writing a review of the literature. You state facts and then reference your source. In a results section, the statistics are your evidence or reference for the conclusions you present. The results should summarize the important results of the study, using descriptive and inferential statistics and a few well-planned and carefully crafted illustrations.

18. Report results by stating your conclusions in clear concise statements.

19. The statistical test should not be the focus of the sentence (as in "statisticalesse" - "Tukey post-hoc testing revealed significant decrease (p<.05) in perceived pain in groups that received cold, TENS, or the combined
treatment*). Writing in statistics often obscures the conclusions by emphasizing the method and not the meaning. The important information is the meaning of the results.

20. Statistics do not indicate or prove anything; they provide you with support for making a decision. When you review the literature, you make a statement and reference others' writings to support your statement. Use a similar approach when reporting results; make a statement and then reference that statement with your statistical results.

21. Statistical tests do not find differences. They provide evidence that a difference between groups is probably real. Looking at the group means tells you if the groups are different; however you must decide if the differences are real or if they occurred by chance. Real differences mean they were caused by your independent variable and not by chance. By chance means the differences were caused by variables other than your independent variable.

22. The symbol "p" when used to refer to the level of probability, is written italicized and in the lower case. (p<.05)

23. When indicating the level of significance or probability, use only three numbers if the first is not a zero. If the first number is a zero, continue numbers until the first non-zero (i.e., .0002; not .00 or .00023).

24. Put your results in perspective with your expectations and compare your results with the rest of the world. Don't repeat or rehash the results, discuss them.

25. The emphasis of the discussion should not be on other authors but rather on what they reported and how it relates to your work.

26. The discussion must address the contribution the study makes toward theory.

27. The last part of the discussion must suggest how readers might apply the information presented. While the application may be apparent to you, it may not be apparent to first time readers unless you point it out.

28. The body of a review of literature article should be organized into subsections in which related thoughts of others are presented, summarized, and referenced. Each subsection should have a heading and brief summary, possibly one sentence. Sections must be arranged so that they progressively focus on the problem or question posed in the introduction.

29. The body of a case study should include the following components: personal data, chief complaint history or present complaint, results of physical examination, medical history, diagnosis, treatment, and clinical course, criteria for return to activities, and deviation from the expected.

CITATIONS AND REFERENCES

30. Each citation in the text of the manuscript takes the form of a superscript number that indicates the number assigned to the citation. It is placed directly after the reference or the name of the author being cited. References should be used liberally. It is unethical to present others' ideas as your own. Also, use references so that readers who desire further information on the topic can benefit from your scholarship.

31. The reference page(s) should list authors numerically in the order used in the text and in alphabetical order and should be in the following form:

Article - author(s) with surname and initials, title of article, journal title with abbreviations as per Index Medicus (italicized or underlined), issue month if journal is not consecutively paged from issue to issue, year, volume, inclusive pages. Example:

**Book** - author(s), title of book (italicized or underlined), city and state of publication, publisher, year, inclusive pages of citation. Example:


**Secondary Source** – the original source is stated with the addition of Cited by using the source where it was cited. See the AMA Manual of Style for other examples. Example:


32. All statements and ideas of others must be referenced. If the author(s) is (are) not mentioned by name, the reference should be placed after the phrase or first mention of the idea.

33. Anytime you mention another author by name; author must be referenced immediately after name in the same paragraph. Example:

Sanders 22 reported... NOT Sanders reported...22

34. When referring by name to a work with multiple authors; if two authors use both names; if there are three or more authors, use the name of the first author and "et al" which means "and others". Note the punctuation with et al; there are no commas or periods. Reference immediately after et al.

35. When the reference is at the end of a sentence, it should be placed after the period and after any quotation marks.

36. It may be appropriate to refer to ideas or results from numerous authors in the same sentence. In doing so, you would list the references in numerical order. Example:

"The sky is a shade of blue 1,6,10,21..."

37. Personal communications are not included in the reference list, but may be included in the text. Example:

In a conversation with B Sanders, PhD (April 1997)...."

**STYLE**

38. Always refer to the research and writing of others in past tense.

39. Subheadings should be used. Main or first level headers should be placed centered, typed in all capitals, bolded, and not underlined. If the information under a header needs to be subdivided into two or more sections, use second level or subheads. These should be centered and bolded with the first letter of each word capitalized.

40. Begin numbering the pages of your manuscript with the abstract pages as #1; then, consecutively number all successive pages including illustrations.

41. The purposes of tables are to centralize large amounts of data, to save space and to eliminate long paragraphs of text. Tables should not be redundant of text. Put your information either in the text or the table and not both. You must refer the reader to the table. Point out the highlights in the table, but do not be too explanatory with a lengthy text.
42. Don't put information in a table that can more easily be presented and understood in the text. Readers should be able to understand the information in the table without referring to the text. The title of a table should also be understood without referring to the text.

43. Identify the units of measurement of the tabulated data in the most general way possible. If all data in the table have the same unit of measurement, that unit should be in parentheses following the table title. If the columns or rows have different units of measurement, but all data in a particular column or row have the same unit, identify the unit (within parenthesis) as part of the column header or row identifier.

44. When a table contains data that have been averaged, be sure to report the mean plus or minus SD.

45. Tables should stand alone. They should have both a title and a legend.

46. Illustrations are often helpful in presenting concepts that are difficult to describe.

47. Each illustration should have a legend that describes the illustration and emphasizes its important points.

48. If an illustration has been published previously, written permission for its use must be obtained from the copyright holder (usually the publisher). The original source should be cited as a reference.

49. The following texts provide additional helpful information for writers.

50. A style manual is a collection of rules and regulations that editors get tired of repeating to authors. The answers to most questions can be found here. The AMA Manual of Style has been adopted as the official style manual of the American Physical Therapy Association and, therefore, for the Department of Physical Therapy.

51. Structure is only half the battle. Grammar and style are equally important.

52. Numbers appearing at the beginning of a sentence, title, or subheading should be spelled out. Numbers greater than nine can use Arabic numerals with the previous exceptions. Numbers nine and under should be spelled out.

53. Appendices are discouraged by AMA style. However, this is in reference to publication. You may include appendices if the material is an adjunct to the text. An example might be a survey instrument.

54. Commas should be used to separate three or more elements in a series and should be used before the conjunction and the final item.

55. Em dashes are used to indicate an interruption or break in thought in a sentence.

56. Gender neutral language should be used when appropriate. Try to word sentences so that you avoid the use of "he and/or she."

57. Abbreviations should be limited to internationally approved and accepted units of measure and well-recognized clinical and technical terms and symbols.

58. When you use the words "however" or "therefore" in the middle of a sentence and the phrases before and after could stand alone as complete sentences, place a semicolon before the "however" and a comma after it. If one or both phrases are not complete sentences, place a comma before and after the "however".
59. Go to the library and peruse various articles and theses - this is a great way to examine evidence of these writing tips!

These writing tips compiled and presented by the faculty of the Department of Physical Therapy, Texas State University-San Marcos. May 1997, Revised July 1998, Revised June 2001, May 2004