

Avoiding Common Writing Mistakes That Make Your Editors and Reviewers Cringe

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Writing for scientific journals is not an inherently simple task for most people. It requires purposeful effort and multiple revisions of the initial manuscript draft. While each author and article has its own individuality, writing well to address the core elements of a scientific report is necessary. As editors of the *IJTM*, we often see weaknesses in the core elements of the manuscripts we receive. This editorial summarizes common recurring issues, and provides suggestions on how to avoid these pitfalls in the submission of a research article or case report to the *IJTM*.

KEY WORDS: editorial, medical writing, journal article

Writing a quality scientific manuscript for publication in a professional journal is not an easy task. Multiple manuscript revisions and feedback from colleagues, teachers, and ultimately reviewers help hone a quality report, but understanding core elements of a scientific paper and how to write about them can greatly facilitate the process. The *IJTM* editors often see many core writing issues insufficiently addressed, which subsequently require extra reviewer, editor, and author time to support the development of a rigorous final product. This editorial summarizes many recurring issues in manuscripts submitted to the *IJTM* and offers suggestions on how to address them. Concepts presented below are applicable to both formal research projects and case reports. We recommend that anyone writing in the massage and bodywork field familiarize themselves with these basic elements of a research manuscript so that your published work can be fully and readily appreciated.

OVERARCHING ISSUES

While a manuscript is comprised of multiple sections that can appear as separate, independent pieces, they are really separate “chapters” of the same “book.” Therefore, it is important to reflect on the manuscript as a whole. Oftentimes, days or weeks pass between the writing of different sections, which

can result in new ideas that may not be congruent with earlier writings. The flow in a piece of writing involves a balance of concisely stating necessary elements for adequate comprehension without extraneous or irrelevant information that distracts the reader. Transitions between sentences and paragraphs must be logical so as to carry the reader from one concept to the next.

Two of the most overlooked writing issues are conflicts of interest and unsubstantiated statements. The former has been addressed in a previous editorial (March 2013). Briefly, individuals who have multiple roles in a study—for example, being researcher *and* therapist or owner of a therapy or technique—must look carefully at the potential impacts on the research because it could be inferred that the individual has a vested or biased interest in a particular outcome. Unsubstantiated statements are seemingly factual statements that lack supporting evidence. This problem can often be solved by supplying a current reference(s) to support the statement. While many statements could be “common knowledge” in a particular community, they may not be recognized that way by others; providing a citation for the statement validates that the assertion is sound.

THE ABSTRACT

An abstract concisely summarizes the study and should be written last so that it represents the final thinking on the study. Because abstracts are word-count limited, it is important to include only the most relevant information. They should never have information that is not supported or stated in the main body of the manuscript.

INTRODUCTION

This section should not be exhaustive on the topic. It should contain sufficient information about the topic such that the context of the research study or case report is clear to a reader. This section should highlight the topic’s importance to the field and lead

to the gap in knowledge that the research will address. A good literature search is important to provide foundational evidence that establishes the need for the study or report. Simply writing without supportive citations makes the manuscript appear more opinion than scientifically based. At the end of the Introduction, the primary hypothesis or objectives of the project should not only be obvious to the reader but clearly stated. Case reports are no exception. Revisit the Introduction near the end of the writing process to ensure it reflects an appropriate basis for the rest of the manuscript.

METHODS

Within a manuscript, the two most important sections are the Methods and the Results because these are the “what was done” and “what was found” portions of the study. They should be written without author bias or interpretation. These two sections enable readers to independently understand the study, and are the most heavily scrutinized in the review process. Therefore, it is important that both are logical and complete.

The study design or methods used should relate to the hypothesis/objectives and clearly be a design suitable to answer the research question. Selecting an outcome measure(s) can be difficult for many reasons (e.g., cost, ease of use, availability), but it should be justified in terms of appropriate use for the hypothesis/objectives. The outcome measure should be a validated measure, or its development (e.g., surveys) and testing should be described. For the primary outcome, a power analysis or expected effect size and justification should be provided, and when appropriate, related to the description of the sample size calculation. Use of reporting guidelines (e.g., CONSORT and CARE extensions for nonpharmacological interventions/therapeutic massage and bodywork) can be beneficial in the preparation and writing of a manuscript to ensure critical methodological elements of a study have been performed and described; using the appropriate reporting guideline is expected for *IJTMB* submissions. The author guidelines and the editors can provide guidance to identifying an appropriate one to use.

The Methods section should include statements that the study has been reviewed and approved by an ethical review board and subjects or participants gave informed consent. These statements assure readers that an independent third party has reviewed and approved of the study methods, and that the participants are aware they are part of a research study. Ethics protocols must be in place prior to starting the study; not clearly stating in the manuscript that they were reviewed and approved is grounds for rejection. This includes consent for publication for case reports.

RESULTS

The Results section of a manuscript is dryly written so as not to unduly influence a reader—the results, favorable or unfavorable, should stand on their own without adjectives that may subtly influence interpretation. That doesn’t mean that presentation of the results should be trivialized. Any descriptive or outcome variable mentioned in the Methods section should be presented in the Results section, in the same order as in the Methods section. The text portion of the Results section should highlight findings that are of high importance with regard to the hypothesis or that are important to help put context to the study. Appropriate measurement outcomes, such as means, p-values, and confidence intervals, should be included. In most studies, there is too much data to place solely in the text of this section, where long lists of numbers would be exceedingly tedious to read and the key points likely missed. Therefore, presentation of data in tables and figures is extremely helpful to a reader. While tables and figures can be challenging to create, when done well they can convey and translate even complex data clearly to a reader. Although some editing occurs to tables and figures in the copyediting phase prior to publication, creation of tables and figures that approximate how they should look once in print is beneficial. See the following examples of clear tables and results: <http://www.ijtm.org/index.php/ijtm/article/view/241/334>, and <http://www.ijtm.org/index.php/ijtm/article/view/252/324>.

DISCUSSION

This section of the manuscript is not intended to be a rewrite of the Introduction, nor should it contain new results (belongs in Results) or new foundational information (belongs in Introduction). Instead, it should emphasize key study findings in context with the hypothesis or objectives, explain the value of the findings to a clinical or educational setting, and discuss the specific contribution of the findings in context with other literature on the topic. This section is an opportunity for the authors to put proper perspective to their study (both the favorable and the unattractive). It is difficult to conduct a research study and no study is conducted perfectly. Decisions made before the study begins, or even while it is ongoing, have an impact later on in the analysis and presentation process.

While most authors do a good job of presenting a study’s strengths, study limitations are often overlooked or added as an afterthought. However, study limitations are an important component of the Discussion. They help put the findings into their proper context by identifying aspects of the study that could potentially influence validity and,

therefore, potentially lead to a different conclusion. It is insufficient for authors to simply state that limitations exist or identify a superficial limitation of the study. This is a section that may require some introspection.

In the same manner, there should never be an over-reach in the conclusion—that is, making statements that go beyond what is supported by the findings or that are not relevant to your hypothesis/objectives. There are inherent constraints to each study design and limits when few outcome variables attain statistical significance, which may make study conclusions more subdued. Nevertheless, publication of studies contribute important information to the field, so authors of all studies, regardless of study design or findings, should strive to present accurately their conclusions within the confines of the research.

We hope this brief review of common weaknesses in submissions to the *IJTMB* is informative, and will lead to a smoother and more valuable review process and, ultimately, to better reporting of research in the massage and bodywork field.

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