A Guide to Reviewing Manuscripts

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MCH professionals play an invaluable role by serving as peer-reviewers for their professional journal. The peer-review process is a fundamental part of maintaining the scientific rigor and professional relevance of our field’s literature. The purpose of this article is to provide guidance for the review of manuscripts submitted for publication to professional and scientific journals. In addition, a structure is proposed for undertaking a review and organizing the written response to the editor and the authors.

KEY WORDS: literature review; research; publishing.

INTRODUCTION AND PURPOSE

Maternal and Child Health (MCH) professionals are aided in their work and ongoing education by having available a professional journal dedicated to their field. Whether we are practitioners in federal, state and local agencies and organizations, academics and researchers in universities, or students preparing for future careers, a professional journal provides us a vehicle to: record our practice and research efforts, share what we have discovered about needs, risks, etiology, effectiveness, performance, etc., present ideas and hypotheses, propose new models, programs and policies, and, in all, document our collective contributions to the knowledge of the MCH profession and to the improvement of the health, safety, well-being and appropriate development of children and their families. The benefit of keeping a journal of our professional research and practice accomplishments is well-accepted. It supports continuing and graduate education and guides programmatic, policy and research development. It is therefore in the interests of the entire MCH community that we work to assure that our journal maintains a high level of professional quality. This entails a joint effort on the part of the journal editors, the authors of submitted manuscripts and, most importantly, the reviewers of those manuscripts.

The MCH professional plays an invaluable role by serving as a peer-reviewer for his or her professional journal. The far-reaching impact and importance of this function can not be overstated. Foremost, the peer-review process is a fundamental part of our efforts to maintain our journal’s scientific rigor, to limit personal bias in the selection of contributions for publication, and to ensure that the articles selected have professional relevance. In this regard, the use of reviewers from the full range of the MCH field is essential. Whether the reviewer is a faculty member, a state or local practitioner, or a student, their insights and points of view are valuable and make a significant contribution toward improving the MCH literature. Moreover, reviewing the research of others lays a foundation for improving one’s own research skills, as it entails the critical appraisal of a wide range of potential scientific concerns, including variable measurement issues, study design, statistical analysis, and ethics. The concerns considered by reviewers are those faced by each author. Accordingly, reviewing manuscripts provides the training to write manuscripts and to continually improve their quality.

RESPONSIBILITIES OF THE REVIEWER

Reviewing manuscripts submitted for publication to a professional/scientific journal in one’s
field involves responsibilities to both the profession/field/journal and to the authors of the manuscripts. By agreeing to review a manuscript, the reviewer assumes the obligation to the field to maintain and improve the quality and scientific rigor of the profession’s journal, to consider the interests and backgrounds of the readership, and to undertake the task in a timely, thorough and ethical manner. To the authors of the submitted manuscript, there is an obligation to provide an unbiased opinion, to offer constructive comments, to be honest in the case of a rejection, to clearly explain concerns, and to treat the manuscript in a confidential manner.

The ageless adage, “do unto others as you would have them do unto you,” nicely summarizes the key aspects of the responsibilities of reviewers. Emulating the type of reviewer that you would want to both maintain the quality of your journal and constructively review your own work is a good starting point for developing a reviewing style. Given that many articles represent months or even years of work, the decisions to be made by reviewers are serious. A recommendation for rejection should be accompanied by information that will help the authors both understand the basis for rejection and gain useful insights about how to improve their work. Similarly, recommendations for acceptance should be based on the scientific and professional merits of the submission and suggestions for modifications should encourage and guide the author towards even better scholarship. Meeting these responsibilities takes time and commitment and reflects the reviewer’s dedication to their colleagues and to the development of their field of research and practice.

STRUCTURAL APPROACH FOR REVIEWING

The purpose of this article is to provide guidance for the review of manuscripts submitted for publication to professional and scientific journals. In addition, a structure is proposed for undertaking a review and organizing the written response to the editor and the authors. It should be noted that there are many available workshops and published guides for reviewers (1–7) Most of these contain similar information and there is no single preferred approach.

The remainder of this article is organized around the format and traditional sections of most research manuscripts: Introduction, Methods/Data, Results and Discussion. For each section of the manuscript under review, key issues are identified for the reviewer to consider. To the extent that these issues are addressed well in the manuscript, brief comments to that effect can be made in the written response to the author. When the reviewer feels that these issues are not well addressed, they should be specifically noted with a request that the author respond to the concern and modify the manuscript as needed.

The written response of the reviewer to the author can be divided into two main sections. The first section contains general comments about the manuscript as a whole. Such comments about the study may focus on its: 1) relevance and importance to the field, 2) interest to the readership and multiple disciplines, and 3) originality of topic, data and methods. Additional comments can be offered about the: 1) length of the manuscript, e.g., is it too long and wordy, 2) the organization of the material, and 3) the grammar and style. The second section of the review should offer specific comments, which can be organized by section, taking the same format as the manuscript. Here, manuscript page and paragraph numbers can be given to identify phrases, tables or figures that are in question.

THE INTRODUCTION

The introduction of a manuscript should provide an indication of the general problem that the article addresses. This overview of the problem should concisely make evident why this topic of study is important to the field and the readership. Typically, authors describe what populations and numbers of cases are involved and highlight rates, costs, potential for spread, or long-term consequences in order to establish the magnitude of the problem and the specific focus of the research. The data and highlights from previous research should be referenced and existing theories, controversies and unresolved issues discussed. Finally, the study purpose, i.e., what the study hopes to accomplish, should be stated, along with specific study hypotheses. At the least, the following should be given in the Introduction:

• A clear and succinct statement of the problem and its relevance;
• Essential background data and information and germane references to place the study in context and to establish its importance; and,
• A clear statement of the study’s purpose and hypotheses.

THE METHODS/DATA

The Methods section of a manuscript should be sufficiently detailed so that the reviewer and the readership obtains a clear understanding of: (1) how the data were collected or obtained, (2) how the key variables were defined and measured, e.g., which specific index of prenatal care was used to determine adequate utilization, 3) the study design, 4) the statistical methods used for data analysis, and 5) the actions taken to assure that human subjects concerns have been reviewed and addressed. As the purpose of the Methods section is to describe to readers what the researcher did to obtain their results, a reviewer must address the question of whether there is ample detail, within reason, to replicate the study elsewhere. There are grey areas between too little, just right and too much detail. This is a matter of judgment that each of the typically three reviewers and the assigned editor of each manuscript must make, usually resulting in a general consensus.

In addition to assessing if there is a complete description of the study methods, reviewers should also consider if the data, measurement, study design and statistical analysis methods are appropriate, given the study purpose. Not all reviewers are experts in research design and statistical methods and, unless those are their areas of professional focus, it is not expected that they are. It is the role of the editors to select reviewers with a range of talents and expertise and weigh their comments accordingly. It is appropriate for reviewers to indicate in their responses that they are not experts in certain areas but still raise concerns about statements that are confusing to them.

Depending on their applicability to the study, items in the following list should be described in the Methods section and their use should be appropriate within the context of the study parameters:

• Source of data;
• Case selection criteria, sampling techniques, and the number of cases;
• Study/research design;
• Definition and measurement of important variables;
• Data analysis plan and statistical analysis methods/tests; and,
• Human subjects review.

THE RESULTS

The Results section presents the findings of the study. Tables are used to depict numerical findings and the text need not duplicate those other than describing and providing an example of how to read the tables. Figures are employed to provide visual images of trends and relationships.

There are several key considerations for reviewing a Results section. The first consideration is whether there is a logical presentation of results, e.g., is there a logical progression to the analysis from an initial univariate description of population characteristics, to a bivariate relationship between independent and dependent variables, to a final multivariate analysis. The presentation of the results should follow the analysis plan described in the Methods section. Next, all tables and figures should be clearly, completely and accurately labeled. Moreover, the definitions of variables used in these displays should be either self-evident or previously defined. Finally, the results should be presented with a neutral description and without interpretation. While it certainly is appropriate to indicate that findings are significant, based on statistical testing, interpretations as to the importance and meaning of the results are to be given in the Discussion section.

THE DISCUSSION

The Discussion section allows the author to sum-up and interpret the study findings. While it is appropriate for the author to state opinions in this section, there are boundaries to this, as all conclusions should be supported by the results. The Discussion should provide a concise summary of the findings, relate them to the stated study purpose, and make explicit how the study results resolved the hypothesis. It should be clear to what extent the study purpose was achieved. For topics where there may be controversies in the literature, concluding statements regarding how the present study added to the literature are desirable.

All research studies have limitations. The discussion section offers the author the opportunity to describe the limitations of the study and indicate possible cautions for interpreting the results and generalizing the findings.

Given the distinct practice focus of the MCH field, a discussion of the relevant program and policy implications of work should be included in
manuscript submitted to the Mother and Child Health Journal. In addition to proposing possible future research directions stemming from their study, research articles should offer suggestions for how their study results may have applications for practitioners. Likewise, practice-oriented articles should also address potential research needs.

THE REFERENCES

The Reference section is often over-looked by reviewers, other than a check to see if one’s own articles are cited. Nevertheless, items for concern are whether the references have been accurately cited, e.g., correct name, title and journal information. Even more important is whether the reference was validly cited, i.e., did the referenced article actually say what it is ascribed to have said. The invalid attribution of statements to cited references can lead to angry letters to the editor and formal complaints. The equally important corollary of this concern is plagiarism. Lastly, attention should be given to the extent that current references have been used and whether there was a reasonably unbiased selection of references. Citing references that reflect only one side of an existing controversy in the literature is an issue for concern.

TITLE, ABSTRACT AND KEYWORDS

While readers typically look at the title and abstract before reading the article, a reviewer needs to revisit them afterward. The importance of interesting and accurate titles and abstracts cannot be overstated during this period of transition toward electronic journals, where search engines will increasingly direct readers to the articles based on keywords, either specifically indicated as such or contained in titles. The choice of a title and keywords may determine if an interested reader finds this study among the host of articles contained in the ever growing number of electronically available journals. A misleading title limits the contribution of the work. It is also critical that the abstract provide a faithful, clear and concise summary of the article.

THE SUMMARY APPRAISAL

OF THE MANUSCRIPT

Reviewers are asked to provide journal editors with a summary appraisal of the manuscript, e.g., accept, accept with modification, or reject. Sometimes, the decision is clear; oftentimes, it is a difficult choice. There are several aspects to consider; the first is whether the limitations of the manuscript can reasonably be addressed in a revised submission. If fixing perceived study design or analysis flaws would entail substantial reanalysis of the data or require collecting new data, the manuscript should be rejected and resubmitted as a new submission after changes are made. It can also be difficult to decide if a major revision is possible, particularly if the manuscript does not provide an impartial and unbiased presentation of the results.

Reviewers of the Mother and Child Health Journal are asked to rate the article on a series of factors as outlined in Table I and to indicate priority for publication: low, medium or high. Finally, reviewers should consider if the manuscript is right for the journal. Will it be of interest and importance to the readership, multiple disciplines and the field? Is the topic, the data or methods original and of sufficient priority to publish? Even though a study may be acceptable on scientific grounds, these additional concerns may suggest that another journal would be more appropriate, based on the interests of their readership.

CONCLUSION

Given the lengthy checklist of items to consider in a review, it is not surprising that many

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<th>Table I. Criteria* for Rating Manuscripts Submitted to the Maternal and Child Health Journal</th>
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<tr>
<td>Importance of topic to MCH Field</td>
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<tr>
<td>Originality of topic/data/methods</td>
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<tr>
<td>Clarity of study purpose/goals/hypothesis</td>
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<td>Clarity/validity of study design &amp; data selection</td>
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<td>Adequacy of sample &amp; data set</td>
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<td>Clarity/validity of statistical methods</td>
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<td>Clarity/validity of measurement of key variables</td>
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<td>Clarity of tables &amp; figures</td>
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<td>Neutral &amp; logical presentation of findings</td>
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<td>Conclusions clear, sound &amp; supported by data</td>
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<tr>
<td>Study limitations addressed</td>
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<tr>
<td>Summary addresses study purpose</td>
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<tr>
<td>MCH program/policy implications addressed</td>
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<tr>
<td>Appropriateness/accuracy of references</td>
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<td>Overall grammar, writing style &amp; presentation</td>
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<td>Accurate/adequate abstract</td>
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<td>Relevance to practice</td>
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<td>Relevance to science</td>
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*To be scored on a scale of 1 (superior) to 5 (poor).
MCH professionals feel reluctant to offer to review manuscripts for professional journals. Students and practitioners may feel they lack either experience or specialized research expertise to make critical comments about a research study. While those feelings are often expressed to editors, along with statements about “not wanting to look or do something stupid,” there are compelling reasons for encouraging these individuals to accept a review assignment. As multiple reviewers are selected for each manuscript, what one reviewer misses will likely be picked up by another. Further, editors typically try to select a group of reviewers with various talents and weigh the responses accordingly in making final decisions. Lastly, editors realize that good reviewers are not born but emerge through practice. Reviewers need encouragement and practice to learn and improve their reviewing proficiency, which will in turn support the development of new authors to add to the field’s literature. Strengthening the partnership of authors, editors and reviewers to improve our science and practice is a critical objective of the Maternal and Child Health Journal.

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