How to Be an Excellent Reviewer

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This article will discuss what an editor expects for a quality review of a manuscript dealing with a research study. Reviewing a research paper requires more than academic knowledge and writing skills. It requires expert knowledge of the subject matter field plus expertise in research design and statistical methods.

Keywords: *review; quantitative research; qualitative research; research design; statistics*

Every article published in the *Family and Consumer Sciences Research Journal* is reviewed by three or more professionals before being accepted for publication. There is no formal training school for reviewers, and it is generally assumed that experienced academic professionals will have the needed skills to be a reviewer. Many reviewers do an excellent job, but sometimes reviewers provide only brief and inadequate comments.

A beginning reviewer could benefit by reading the *Evidence Analysis Manual* (2012) published by the Academy of Nutrition and Dietetics. The manual provides specific suggestions on how to review research articles and includes a quality criteria checklist with questions on relevancy and validity.

This article will discuss what an editor expects for a quality review of a manuscript dealing with a research study. Reviewing a research paper requires more than academic knowledge and writing skills. It requires expert knowledge of the subject matter field plus expertise in research design and statistical methods. It also requires that the reviewer takes the time to review the manuscript in detail, a process which may take several hours.

SUGGESTIONS FOR A BEGINNING REVIEWER

First, the reviewer should read the paper to see whether the subject is relevant. Relevancy means that the topic is of current interest and concern to the professional audience in the field. The research study should reflect a new, innovative approach and result in new findings. It should be a study conducted within the last few years—not one conducted 5 or more years ago. If there are already numerous articles published on this topic and there are no new findings, the study is not relevant and thus not worthy of publication.

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If the paper is relevant, the reviewer should read it a second time, studying each section carefully, and then prepare comments for the author. For clear communication, it is best to list the page number and line number to which each comment applies.

REVIEWER GUIDELINES

Introduction, Background, and Purpose

This section should explain the rationale of why the research topic was worthy of being studied. The purpose or hypotheses for the study should be clearly stated and should be measurable (Boushey, Harris, Bruemmer, Archer & Van Horn, 2006). The reviewer should keep the purpose or hypotheses in mind when reading the rest of the manuscript.

Research Design and Methods

The research design will determine appropriate methods for the study. Methods for quantitative research are quite different from those used for qualitative research. Quantitative research studies use methods such as clinical trials, cohort studies, and cross-sectional studies and often deal with large numbers of subjects and data (Boushey et al., 2006). Quantitative research studies typically use statistical methods to analyze data. Qualitative research is inductive, exploring opinions and attitudes of people related to their life experiences (Harris et al., 2009). All research methods should be approved by an institutional review board before the research is begun.

The research paper should describe methods used for the study in chronological order using appropriate subtitles. For example, the typical sequence for a survey would be to develop the survey instrument, validate it by review with several professionals, pilot test the survey, make needed changes, recruit participants, collect survey data, and analyze data. Appropriate subtitles in the methods section might be Instrument, Participants, Data Collection, and Data Analysis.

Authors of research articles should provide specific details on research methods. Examples of some questions that reviewers might ask are as follows: How were subjects recruited? Were study groups comparable and representative of the population studied? What were inclusion/exclusion criteria? How were the data collected? Were the survey instruments, tests, and procedures used to collect data valid and reliable? Were appropriate statistical methods used? More examples of questions can be found in the *Evidence Analysis Manual* (Academy of Nutrition & Dietetics, 2012).

Many researchers using quantitative methods have difficulty with statistical analyses. Most researchers can benefit by seeking the advice of a qualified statistician early in the research process. First, one must have an appropriate number of participants for the statistical methods used. Second, data must follow a normal distribution to use parametric methods. Use of *t*-tests, Pearson's correlation, and ANOVA all require that data have a normal distribution (Boushey, Harris, Bruemmer & Archer, 2008). If data do not follow a normal distribution, then the researcher may be able to use nonparametric methods such as Mann–Whitney or Kruskal–Wallis tests.

One error that is commonly encountered is that a researcher has used chi-square analysis, but the researcher lacked sufficient data for this method (i.e., at least 5 per cell). Another error sometimes seen is that the author reports means and standard deviations with the standard deviations being much larger than the mean. This indicates that there was not a normal distribution of data. Nonparametric statistical methods should have been used, and the median values of variables reported.

Results, Discussion, and Conclusions

Results, discussion, and conclusions should be related to the purpose, objectives, or hypotheses of the study and should be organized accordingly. Results should summarize findings, but the results do not need to repeat all of the numerical data given in tables that accompany the article. Discussion of results should compare results of the study with similar studies previously conducted. In this section, the author usually lists limitations of the study and explains how they were handled.

Tables should have a specific title and should be able to stand alone. That means that the reader should be able to interpret the data displayed in the table without reading the manuscript.

References

The paper should provide appropriate references from experts in the field. At least some of the references should have been published within the past few years. References should be correctly cited using consistent reference format. The *Family and Consumer Sciences Research Journal* uses the reference format developed by the American Psychological Association (2010).

ORGANIZATION AND WRITING

The paper should be well organized in logical sequence with appropriate headings and subheadings. Each paragraph should focus coherently around one central thought. There should be no one-sentence paragraphs. The manuscript should be clearly written using scientific language without awkward wording. There should be no run-on sentences or sentence fragments.

The entire paper should be written in third person. A frequent error by authors is to insert some sentences written in first person or second person. The reviewer should look for errors in grammar, spelling, and punctuation and comment on these. It is not necessary for the reviewer to indicate every specific error in the paper, but the reviewer should give the author enough guidance so that he/she can appropriately revise the manuscript. The reviewer should also comment on awkward or repetitive wording that needs to be improved for clarity.

ADVICE TO BEGINNING AUTHORS

Beginning authors who are submitting a manuscript based on a completed research project should realize that it takes many steps to transform a thesis or

dissertation into a paper worthy of publication. Most peer-reviewed journals have manuscript submission guidelines that summarize requirements for papers that are submitted. The Manuscript Submission Guidelines for the *Family and Consumer Sciences Research Journal* are published inside the back cover of each issue and on the Web site (DeVaney, 2013). These requirements usually include article word length, components of the article, reference format, number of tables, and other details. To ensure acceptance for publication, authors should follow these requirements scrupulously. Taking the time to meet all requirements can make the difference between rejection and acceptance of the manuscript.

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