

Nurse Author & Editor

Leslie H. Nicoll, PhD, MBA, RN, FAAN Editor-in-Chief

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2 WEEKS AGO EDIT

An Editor's Perspective on Reporting Research

Strategies for Writing a Research Article: An Editor's Perspective

Patricia Gonce Morton

NURSE AUTHOR & EDITOR, 2017, 27(1), 5

Publishing the results of your study is one of the most important steps of the research process. The publication of research findings contributes to the dissemination of knowledge, helps shape the practice of nursing, and leads to ideas for future investigations. Although researchers are often hesitant to report non-significant findings, these results can be just as important to circulate as significant results, especially when investigating interventions for patient care.

As the Editor of *The Journal of Professional Nursing* (JPN) I have read manuscripts reporting research that run the gamut, from excellent to “not quite ready for

prime time.” In this article, I will share insights from an editor’s perspective, so you will understand the essential components that I look for in a research article. I will also include tips for what to include in each section, again, based on my experience.

THE ESSENTIAL ELEMENTS

Abstract

Most journals require an abstract as part of the research article and JPN is no exception. Our guidelines request “a concise and factual abstract of 150-200 words.” Some journals want a structured abstract that has headings. In either case, the abstract should begin with a background or problem statement. Next, clearly state the aims or purposes of the research or the specific research questions or hypotheses that were addressed in the study. A brief statement that describes the research method and design that were used comes next. Following the methods and design section, offer a concise synopsis of the results followed by a conclusion with implications.

Consider your abstract the “selling point” of your article—this is how I review it as an editor. I should have a good sense of what will follow in the next 15-20 pages of the manuscript. Keep this in mind as you write the abstract and make sure it conveys the essence of your study and the findings.

Introduction

Begin the research article with an introduction that explains to the reader the scope and significance of the problem you selected to study. I want to see background information that will help my readers understand why this study was important to conduct and how it will contribute to the science of the discipline. After reading the introduction, I want to have a clear sense of the problem you are

trying to solve, the variables of interest, and the relationship among those variables.

Review of the Literature

The review of the literature is an essential element of a research article. As a journal editor, I have recently received many research reports that have skipped this important portion of the article. The lack of a review of the literature will put your article at high risk for rejection.

The review of the literature, or “Background” as it is called in some journals, is intended to help the reader understand what is known and what is not known about your topic, and how your study will fill the gap. The review is written as a succinct summary of the key findings from the literature and is often organized by the variables of the study. Avoid the urge to have a long list of individual studies that are described one by one in detail. This format may have been an acceptable approach for school papers, but it is not the style used in a journal article.

Be sure the literature review contains current references. What is current? This depends on your area of study, but you should strive for articles published within the past few years. Citations that are more than 10 years old may be dated, unless they are considered “classics” that need to be included. Cite primary references, not secondary sources. Also, be careful about over-citing. You do not need four sources to document a single statistic—one is enough.

At the end of the review of the literature, state your research questions or hypotheses. The reader should clearly understand how your questions flow from the gap in the literature that you identified. Be certain that the research questions or hypotheses are stated the same way whenever mentioned in the article, but

keep in mind, you don't need to state them repeatedly. Give your reader some credit for having a memory!

Methods and Design

The methods and design sections appear next. Be clear about the method that you used. Was it a quantitative or qualitative method? Provide more detail about the selected method. If you used a qualitative method, inform the reader that you employed phenomenology, grounded theory, or ethnography. For quantitative studies, be specific about experimental, quasi-experimental, or descriptive methods.

Research design refers to the blueprint that you prepared using the chosen research method and the design delineates the steps that you took to answer the research question. If the wrong research method or design were used to answer your research question, the article will be rejected by the editor no matter how well written it is.

SAMPLE

Next up: who participated in your study. Describe the inclusion and exclusion criteria used to select your sample and how you recruited your participants. How were they contacted to participate in the study? Were participants anonymous? If not, how did you protect their confidentiality? For certain populations, it may be important to describe how you avoided any appearance of coercion and how you eliminated subjects' fear of retaliation if they did not participate in your study. Provide specific information on how you determined the sampling method and sample size that was needed to answer your research questions. I, along with reviewers, look for a power analysis to support the sample size which is necessary to evaluate that the statistical tests you employed to analyze the data were appropriate.

One brief comment on the use of the word “subjects” or “participants.” Historically, the word “subjects” was used in quantitative studies, while “participants” was more common in qualitative investigations. That line has become blurred and many researchers and editors prefer the use of participants as it is considered to be more respectful. I suggest reading several articles in your selected journal to determine what term is most commonly used and thus preferred by the editor.

INSTRUMENTS

If you used an instrument for your study, provide the rationale for its selection, along with who developed it. Give a brief description of the instrument and its purpose. For example, state how many questions were included and how they were answered, such as a Likert scale or open-ended responses. Include data regarding the reliability and validity of the instrument.

Watch out for redundancy when writing about instruments. It is not necessary to say “survey instrument”; survey is sufficient. Avoid the word “tool”—better choices are instrument, assessment, survey, evaluation, or examination.

PROCEDURE

In this section, identify the steps that were used to carry out the study. The procedures must be described in sufficient detail to permit them to be replicated by another researcher. For example, if you used a survey, explain how it was distributed, how many reminders were sent to the participants, and how the surveys were returned to you. If you conducted in-person interviews, describe where these took place, who was present, how long they lasted, and if the interviews were recorded.

INSTITUTIONAL REVIEW BOARD APPROVAL

You must state the institution that reviewed and granted approval for your study. It is never your prerogative as the researcher to decide that your study is exempt from review by the institutional review board (IRB). Only the IRB can make that determination.

As JPN is a nursing education journal, I often receive research manuscripts where students were the subjects. I become very concerned when there is no mention of IRB approval for the study. When I question the authors, I have sometimes been told that approval was not obtained because the subjects were “just students.” Any study involving human subjects, whether they are students or patients, must be approved by an IRB before the study is conducted. No research study should ever be published if there is no evidence of IRB review and approval. I know that this is a non-negotiable point for editors so make sure to include this information in your manuscript. Some journals will even ask you to include a copy of the IRB approval letter as part of your submission.

Data Analysis

In this section, it is important to describe the statistical analysis techniques that were used to answer each research question. It is not enough to simply tell the reader that the data were analyzed using a specific statistical software package. The correct statistical test must be employed based on the question and the type of data (nominal, ordinal, interval, and ratio). Indicate the level of statistical significance that was selected.

For qualitative studies, describe the analysis procedures you used, which may not use statistics, but still should be rigorous and appropriate for the data collected. In many qualitative reports, the findings are organized into themes, which may be given an acronym or phrase as a descriptor. This is fine to do but make sure the

acronym or phrase is a good fit, otherwise it might come off sounding forced, or worse, trite.

Results

Organize the results section based on the research questions. The data must be clearly presented and explained. Displaying data in tables or in figures can be helpful and a way to concisely get your findings across. Carefully label the tables and figures to be descriptive of the content. In the narrative, be sure to explain the tables and figures, but don't repeat the data in the text.

When reporting the results, make certain to indicate if the findings were statistically significant or not. For some studies, it may be very important to discuss clinical significance in addition to statistical significance.

A common mistake that is made in the results section is a discussion of relationships among the data that were never delineated in any of the research questions. For example, researchers sometimes report if the outcomes of the study were different based on gender or age. If these relationships between the study variables and age or gender are not part of a research question, then the information should not appear in the results section.

Discussion

Like the results section, the discussion can be organized by the research questions. Don't repeat the results here. Rather, explain what the findings mean. Discuss the results in comparison with the literature. Do your results support or refute prior research? This is not the place to introduce new literature—you want to be building on what was presented in the literature review. Describe the implications of your findings for practice, education, or administration, depending on the focus of your study.

An explanation of non-significant findings is just as important as a discussion of significant findings. I think the greatest challenge is to explain the results when they did not support your hypotheses or expected findings. A common mistake I have seen is to say the findings were “almost significant” and then discuss them as if they were significant. Findings are either significant or not and must be explained in that light.

A second frequent mistake when your findings are not what you expected is to say the results would have been significant if the sample was larger or if the instruments had better reliability or validity. You have no way of knowing if that statement is true. Instead, you must offer the reader an explanation for what you did find, not what you wanted to find.

A third common mistake made in the discussion section is to make conclusions without supporting results. Also, researchers sometimes make generalizations that are not within the scope of the findings. It is essential that the discussion and conclusions are consistent with the results.

Last, don't shortchange the discussion. In many ways, this is the most important part of the paper. Don't negate all your hard work by writing a discussion section of one or two paragraphs.

Limitations, Future Research, Conclusion

Clearly state the limitations of the study. Here is where you can say a limitation was your sample size—perhaps you were not able to recruit the number of participants you expected—or the poor reliability of an instrument with your sample. Some unforeseen circumstances may have arisen during the study which put limits on your investigation; this is the place to discuss them. At the same time, don't go overboard. I have read manuscripts where authors are much better

at figuring out what they did wrong, rather than highlighting what they did right. Don't be that person.

Make recommendations for future research based on the findings. These recommendations should be feasible for another researcher to implement.

Last, wrap up your article with a concise conclusion that provides a satisfying ending for the reader. You don't want to rehash what you have already said but likewise, you don't want to introduce new information or ideas. If you are struggling with the conclusion, I suggest reading several articles in your target journal to see how other authors have tackled this section successfully.

CONCLUSION

Publishing a research article represents an important milestone in the research process. Careful consideration and implementation of the suggestions above will help increase your chances of a successful publication and make an excellent contribution to the science of nursing. As an editor, I am always eager to receive reports of innovative and interesting studies. When the paper has gone through peer review and revision, and I am able to make a decision to accept, I am pleased to have done my part in the knowledge dissemination process.

ABOUT THE AUTHOR

Patricia Gonce Morton, PhD, RN, ACNP-BC, FAAN is Dean and Professor and Louis H. Peery Presidential Endowed Chair at the University of Utah College of Nursing, Salt Lake City, UT. She is also the Editor, *Journal of Professional Nursing* and a member of the Authors-in-Residence for *Nurse Author & Editor*. You can contact her at trish.morton@nurs.utah.edu

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