

# Writing for Research: A Step-by-step Guide to Content, Organization and Presentation

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Chaplains write for varied contexts; however, few are experienced in writing for peer-reviewed research journals. This article outlines the sections contained in a standard research publication. It walks the novice research chaplain through each section addressing content and organization as well as common pitfalls to avoid. These sections are identified as introduction, literature review, methods, results, discussion and conclusion. The article also offers insight into the use of references, development of an abstract and the review process for manuscript submissions.

**CHAPLAINS ARE WRITERS.** Most bring years of varied writing experience, from theological topical papers that review the literature and justify a particular position to sermons designed to support and persuade an audience. Many submit articles for health care system newsletters describing the role of chaplaincy care. Still others are frequent contributors to local news media, offering op-ed pieces. Few, however, are experienced at writing for peer-reviewed publications, particularly as it applies to the dissemination of research.

*Chaplaincy Today*, together with its predecessor *The Caregiver Journal*, long served as a forum to promote the work of emerging researchers in the field of professional chaplaincy. As part of the journal's commitment to the educational enterprise, editorial board members provide extensive feedback and guidance to numerous authors assisting in the development of publishable quality manuscripts. In this, *Chaplaincy Today's* final edition, reviewers and authors offer observations on how to write for research publications. These recommendations address content and format as well as some of the more common pitfalls that may sabotage novice research writers.

Resources directed at guiding authors in the best practices for the dissemination of research writing have accelerated at an explosive rate.<sup>1</sup> This trend reflects the explosion of scientific knowledge over nearly three decades and the need to share this information with others. In addition, professional journal and university library websites have supplemented these resources with information on formatting for publication as well as guidance for particular sections of an article, such as the literature review.<sup>2</sup>

More recently, articles have covered ethics governing research and publication, standardization of measures, subsections of the research manuscript and factors related to selecting, editing and accepting submissions.<sup>3</sup> Nevertheless, a review of the literature uncovered only two chaplain-directed sources on how to write a research manuscript article for publication.<sup>4</sup> Steve Nolan attempts to demystify the process. He suggests five good reasons for writing, explains how to approach academic journals with an idea, offers advice on writing a project and looks at the technical aspects for references and abstracts. Larry VandeCreek instead focuses on the skill set of writing. He addresses four topics: selecting a journal, writing the sections (introduction, methods, results, discussion), coping with style/grammar and rewriting drafts.

General recommendations for formatting a research article follow the outline of the article itself:

- Introduction
- Literature review
- Methods
- Results
- Discussion
- Conclusion

Insights also are offered for the use of references, the development of an abstract and the submission/review/revision process.

## Manuscript Format

### *Introduction*

The introduction identifies what the paper seeks to achieve. It typically answers three questions:

- **What?** What is the problem or issue being addressed? What are the specific aims of the research study?
- **Why?** Why is this problem or issue being addressed?
- **So what?** Why is this important to the current body of research or practice?

An effective problem statement clearly and concisely communicates the problem or issue of interest in one or two well-crafted sentences. This statement communicates the author(s)' objective and often includes a stated or implied position or thesis. A research question (or questions) may be adequate without hypotheses when the intent of the study is exploratory or descriptive.

An article's introduction is often the author's first, best—and sometimes only—opportunity to capture the reader's interest. The introduction requires a clear knowledge of the audience for whom the manuscript is intended. For chaplains, this clarity of audience is critical for capturing and retaining reader interest. The article's impact statement may vary depending on whether the audience is chaplains, hospital administrators or other health care professionals. Language also factors into capturing the interest of a potential reader. Terminology used by one audience may vary from that common to other disciplines. Professional jargon that is assumed for chaplaincy care may not be familiar to other audiences.

While developing a clear, concise problem statement aimed at a specific audience is a start, this alone may not be sufficient to retain reader interest without a compelling reason as to why this particular problem or issue is significant. Establishing problem significance is the marketing of a good idea, persuading readers that this issue warrants their interest and time, even if they initially are disinterested, have limited knowledge of the topic or are predisposed to disagree with the thesis. Establishing problem significance takes several directions including, but not limited to, the following means of getting the reader's attention:

- Demonstrate the relevance and timeliness of the topic.
- Use numbers or statistics.
- Emphasize the magnitude of impact.

In short, this is an opportunity to convince readers that answering this question matters in professional practice or decision making. Note the difference in the examples below.

As chaplains, we are interested in examining the chaplaincy care provided to older patients.

**Compared to**

As chaplains, we are interested in examining the chaplaincy care provided older patients because hospitals anticipate that the number of admissions of patients over the age of sixty-five will increase by 150 percent over the next five years.

As chaplains, we are interested in examining the needs of artificial heart recipients.

**Compared to**

The current three-year survival rate for patients receiving artificial hearts is 35 percent. As chaplains, we are interested in examining the emotional and spiritual needs of these recipients due to the chronic and uncertain nature of this health crisis and its impact on patients and their families.

The lack of a clear research question or hypothesis and the failure to adequately describe the specific aims of a study are among the most common pitfalls for authors in the introduction section. In addition, some authors tend to overreach with multiple questions or aims that are not supported by the study design. These pitfalls are averted by relying on a sequential thinking pattern:

- Describe the specific aims of an article or study.
- Linearly and logically follow the problem statement.
- Explain the problem's significance.

Effective study aims are concise objectives that represent relevant and feasible study goals and directly lead to answering the previously posed study problem. Consider the study aims an implied contract with readers. Study aims alert readers to where the article is leading them and allow them to anticipate the journey. Few readers—and even fewer reviewers—are mind readers; they prefer knowing what to expect.

### ***Literature review***

The literature review is driven by the problem statement provided in the introduction. It offers readers the current status of the body of knowledge pertaining to the problem statement.

Research—*re-search*—by definition implies searching again, and in the world of journal articles, this takes the form of reviewing the literature. What constitutes an adequate literature review involves both quality and quantity. The quality of a literature review is reflected by the demonstrated rigor of the literature search:

- What key words were used?
- What databases were utilized?
- Did this search maintain focus on the topic posed in the problem statement?

- What sources were sought?
- Did the search include published and unpublished sources?
- Did it include journal articles, dissertations and books?
- To what extent did the literature search include possible relevant sources from other areas or disciplines?

In short, the quality of a literature review is determined by the quality of literature surveyed. Unpublished or non-refereed, i.e., articles in journals without peer review, sources are less desirable when published and refereed sources are available. Additionally, even refereed sources may differ by "impact factor," an assigned index of journal prestige. Timeliness also reflects literature quality. When available, more recent sources are preferred over older sources with the exception of classic and seminal works that serve as the starting point for a research stream.

Quantity of the literature reviewed begs the question: how many references are enough? The number of relevant references available to include in a literature review is a function of the maturity of the research problem or issue being examined. The amount of literature related to emerging, novel or cutting edge issues will be far less than that related to frequently posed problems. For example, chaplain researchers may find limited studies on established best practices in chaplaincy care as this is an emerging field. Thus, a literature review may require exploration of research on problems from other fields of study.

Assuming that questions about literature quality and quantity are resolved, how is a literature review constructed and developed? Central to developing a literature review is distinguishing it from an annotated bibliography, thus averting one of the more common pitfalls of this section.

#### **An annotated bibliography**

Is a listing of references accompanied by a brief summary of the specific source.

Reports on the content of the references.

#### **A literature review**

Is the consolidation of a body of references on a common topic by major themes represented in this body of knowledge.

Analyzes the content of the references.

While the length of the literature review section will vary depending on the maturity of the research subject, it typically will not exceed 25 percent of the article's length. Longer reviews tend to fall into the annotated bibliography pitfall of summarizing content. Considerably shorter ones may indicate a lack of investigative rigor on the part of the author.

The literature review concludes with a restatement of the research question and, if specified, the study hypothesis(es). The literature review is the vehicle by which readers learn the basic history of the topic of interest and the premises on which the current study is founded. It identifies what has been studied and concluded about related research questions or even the same question. It also shows how key concepts related to the study are defined, interpreted and/or connected. As the foundation and logic for a current research question, the literature review helps to identify voids in the current body of research and points to how the present study may either supplement available literature or fill an existing void.

### **Methods**

The methods section highlights how the study is designed to answer the problem or research question. It explains the study's measurement, sample, research design, data collection and data analysis.

**Measurement** focuses on the key concepts stated and defined in the introduction and literature review. The operational definitions of key concepts are provided to demonstrate that the study measures what it says it measures. This is referred to as measurement validity and is supported by reference to experts or prior research that also measured this concept in a similar manner. Based on the operational definition, measurements are qualitative, i.e., subjective, or quantitative, i.e., numerical. For quantitative measures, another gauge of quality is reliability, the consistency and precision of a specific measurement instrument. This typically is demonstrated by reporting the degree of correlation. Statistical indicators, such as Cronbach's alpha, are reported as evidence of the reliability of frequently used measurement instruments.

The research question typically specifies or implies the population, the broad group of interest to the research question. The **sample** is the group selected as representing the population. The methods section alerts readers to the strategy used to select the study sample. Sampling roughly falls into two categories:

- Probability, where each member of the population has an equal likelihood of being selected.
- Nonprobability, where different members of the population have different likelihoods of selection.

Randomized samples are probability samples; convenience or purposeful samples are examples of nonprobability samples. The majority of chaplaincy research uses convenience or purposeful samples selected from specific and accessible groups of potential subjects.

The **research design** is the underlying blueprint for the study. Every research design has a name. Labeling and describing the research design communicates the following about the study:

- Timeframe, e.g., cross sectional, longitudinal.
- Complexity, e.g., experimental, quasi-experimental, non-experimental.
- Amount of researcher control over the project, e.g., intervention, subject treatment assignment.

This information allows readers to evaluate the appropriateness and quality of the design relative to the research question. It also signals the extent to which a study is replicable.

**Data collection** describes what information was gathered and from whom. If collected from human subjects, e.g., patients, staff, students, approval by an Institutional Review Board (IRB) is required to assure protection and conformity with federal and institutional standards. If data are collected from medical records or include Personal Health Information (PHI), approval by an institutional board overseeing HIPAA compliance is required. Although there are common standards for approval and oversight, the process and implementation of these standards is institutional-specific. Researchers are encouraged to consult their institutions for detailed information regarding IRB review.

The data collection process—how data were collected, from whom, by whom and when—is important because it conveys the extent to which the study is both generalizable and replicable. Surveys or other instruments used in data collection are described in the methods section. Including appendices with the data collection instruments, recruitment materials and interview questions or scripts is recommended.

The methods section is not complete without **data analysis**, which tells readers how the data acquired will be used to answer the posited research question(s). Initially this is an explanation of what follows data collection. If qualitative data are involved, how will they be summarized to address key themes? If quantitative data are involved, what statistical tests will be performed and

how do these tests answer the research questions posed? If subjects' demographic or other information is collected, will it be used to provide a description of the sample and why? This basic information is helpful in demonstrating the extent to which the sample characteristics mirror those of the study population and the degree to which the results are generalizable.

## **Results**

The results section evolves naturally from the research study's design; it reports the research findings/data. The key to a strong results section rests on the author's ability to capture and organize the findings gathered in the course of the study. The process of developing a categorization of the findings begins with two basic questions:

- What was the study seeking to discover?
- What did the study actually find?
- Reporting of results varies depending on the type of data: qualitative, quantitative or mixed methods, which includes both.

### **Quantitative data**

Generally reported in tables, charts, or graphs that show aggregate numbers and percentages. For some studies, reporting basic statistical analyses, e.g., means, standard deviations, is helpful.

### **Qualitative data**

Typically reported using a combination of tables and narrative form, which often are categorized around themes or other common phenomena.

The reporting of results is more effective when the themes are guided by the data obtained rather than by those that are familiar to the discipline. If the latter course is followed, unanticipated but relevant findings may be overlooked.

Attention to the presentation of the data is critical. Results are best presented in the manner that is most efficient in communicating findings to the reader. Tables, charts and figures are excellent ways to display results and reduce the monotony of gray space. However, a common pitfall for authors is presenting the same findings in multiple forms or figures, or presenting the information in tables but failing to refer to them later in a discussion of findings and implications.

The results section follows a linear progression from the data collection described in the methods section.

### **Methods section**

Describes the data to be collected.

Describes the sampling strategy.

### **Results section**

Describes the findings of what was collected.

Relates the actual sample size, sample characteristics and the response rate, the number of actual subjects compared to all who were potential subjects.

A critical component of the results section is the preservation of the integrity of the data. All data, even those that do not support the hypothesis, are reported. Explanations or interpretations of the findings are reserved for the discussion section.<sup>5</sup> To reiterate, the results section *reports*; avoid the temptation to begin interpretation of the data prematurely. That is the role of the discussion section.

## **Discussion**

The discussion section typically begins with a link to the introduction to the study. Recapping the original motivation for the study, the discussion speaks to how the findings answer the original research question or the original hypothesis statement.<sup>6</sup> The discussion section also refers to the literature review and demonstrates how the current study findings fit into the wider framework of current knowledge. Did the study support or perhaps contradict the current literature? Did the study add to the existing base of knowledge?

For many chaplains, the discussion section is the most interesting to write. It provides an opportunity to offer interpretations of the results and to creatively identify possibilities emerging from the findings, exploring more deeply the implications of the study.<sup>7</sup> Why are the study and its findings important? How might this new understanding be used? For chaplains, these implications may include new insights into care of specific patient populations as well as practical recommendations impacting clinical practice. The discussion section offers the opportunity to address any surprising findings and to speculate on how these unanticipated results might be explained.

The discussion section also responds to the question “What next?” What new information was gained from this study? How might it point to opportunities for future research? Identifying the current study’s strengths and limitations provides the foundation for the improvements in future research.

Here too pitfalls exist. Common among them are rehashing of results, generalizing or over-stating the implications of the findings without sufficient supporting data and expanding beyond the original research question(s).

## **Conclusion**

The conclusion section is the final opportunity to communicate the importance of the study. Often the briefest section of a research paper, it summarizes the research problem, the findings and the implications/recommendations which emerged from the study. Although concise writing is encouraged, one common pitfall is an overly-brief conclusion section, which suggests that the writer ran out of steam. The goal is to maintain the same degree of attentiveness in the conclusion as in the introduction.

## **References**

The reference section is a comprehensive bibliographic list of the sources used in preparation and implementation of the study, including the literature review. References are identified throughout the manuscript and compiled at the conclusion of the paper. Reference formatting style is established by the individual journal to which the manuscript is submitted.

## **Abstract**

Journal submissions are accompanied by an abstract. The importance of an insightful abstract is magnified by considering that it serves as that important “first impression” to readers. The abstract is a concise summary of the entire study that consolidates the original research question, study sample, the study design, the data analysis, the results and the implications described in the discussion. In short, the abstract is written after completion of the article. The length of the abstract is specified by journal editorial guidelines, typically 100–250 words.

## **Submission and review process**

Although this article’s intent is to focus on the content of a journal article, the presentation of a manuscript is critical if it is to maneuver through the review process to publication. Reviewers serve as a journal’s gatekeepers. They typically are experienced professionals within a discipline

who volunteer considerable time without financial compensation. The presentation of the submission may serve to motivate—or de-motivate—the reviewer.

Following simple guidelines such as the use of proper grammar, good organization, good editing (spell/grammar check) and compliance with journal editorial formatting and standards are a given. Consistent tone and verb tense matter. Consideration of the use of tables and exhibits to summarize information, presenting it in an interesting but informative way, breaks the monotony of pages of gray paragraphs. In short, it is the responsibility of authors to assure that poor presentation does not overshadow good ideas and hard work.

Once the study ends, preparing the submission and determining the proper venue for publication are priorities. Journal selection is largely determined by the author's intended audience. While most chaplains tend to look first at the chaplaincy care journals, other professional venues warrant consideration. Articles about chaplains involved in organ donation or support for nursing staff are relevant submissions to journals with an audience of organ procurement organizations or nursing administrators respectively. Article submission also depends on individual journal guidelines. Some journals limit publication to studies with a large sample size, thus restricting submission of many pilot studies. Others may require that authors have specific professional credentials or association membership.

The intent of the article peer review process is to evaluate the quality of the study, the ability of the author to articulate the research and its contribution to the field. Journals which are peer reviewed follow a similar process. As the goal is to provide the readership with relevant, timely and high quality research, the review process constitutes an emotionally bruising time for author(s). Once the editor receives the submission, it is sent to reviewers/editorial board members, who are asked to comment/critique the article. Some journals use a rating scale or established criteria for their evaluation, frequently web based. Reviewers often make helpful suggestions for improving the article for publication.

The timing of the peer review process—from submission to review decision—depends upon the journal, its publishing schedule and the availability of editorial board members to read, critique and respond. The chief editor will share the reviewers' critiques and their rationale. This communication reflects the submission's potential for publication by this journal and in some instances may provide guidance on how to improve it for re-submission.

If a submission is accepted, the actual date of publication varies as it is a function of size of journal, number of issues per year, backlog of accepted articles and special issue themes. Even with the increased number of online journals, the delay between acceptance and publication is often a year or more.

## Conclusion

Participation in research draws chaplains into a network with other health care professionals as peers who speak a common language. It invites chaplains into a broader network of support, encouragement and cooperation with colleagues. Research publication stands as a marker of a discipline's maturity promoting evidence to enhance clinical practice, to improve pedagogy for training and/or to promote quality improvement in management.

Curiosity and inquiry are the natural starting points of research. Moving an idea from a problem statement to the dissemination of new knowledge takes patience and discipline. This article was developed as a resource to assist chaplains in this process.🔥

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<sup>1</sup>To identify sources designed to assist writers in the development of professional research papers, four databases were searched using the key words "writing," "research" and "publication." Google produced 53,500,000 results. OVID (from 1996-June 2012) identified 67 sources; CINAHL, 267; PubMed, approximately 3,300. PubMed indicated that in 1982 there

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were seven articles published on the subject. In 1992, this number increased to 36, with 169 published in 202, 246 in 2011 and 99 as of June 2012.

<sup>2</sup> Journal of Health Care Chaplaincy Guidelines, <http://www.tandfonline.com/action/authorSubmission?journalCode=whcc20&page=instructions> (accessed June 27, 2012); Virginia Commonwealth University Libraries, <http://guides.library.vcu.edu/lit-review?hs=a> (accessed June 27, 2012).

<sup>3</sup> M. Foote, "How to make a good first impression, a proper introduction" *Chest* 130, no. 6 (2006): 1935-37; M. Shuttleworth, *How to Write a Research Paper*, <http://www.lulu.com/shop/martyn-shuttleworth/how-to-write-a-research-paper/paperback/product-12574621.html> (accessed August 29, 2012); J. Coverdale, L. Roberts, L. A. Beresent, "Writing for methods" *Academy of Psychiatry* 30, no. 5 (2006): 361-64; A. J. Davidson, J. B. Carlin, "What a reviewer wants," *Pediatric Anesthesia* 18, no. 12 (2008): 1149-56; Y. Zhang, J. D. Shaw, "Publishing in *AMJ*—part 5: Crafting the methods and results," *Academy of Management Journal* 55, no. 1 (2012): 8-12; M. Geletkanycz, B. J. Tepper, "Publishing in *AMJ*—part 6: Discussing the implications" *Academy of Management Journal* 55, no. 2 (2012): 256-59.

<sup>4</sup> S. Nolan, "Writing for publication: A rough guide for first-time chaplain authors," [http://www.healthcarechaplains.org/information/documents/journal\\_autumn\\_2008.pdf\\_12024\\_pages\\_24-36](http://www.healthcarechaplains.org/information/documents/journal_autumn_2008.pdf_12024_pages_24-36). (accessed August 24, 2012); Larry VandeCreek, "Writing the results" in *A Research Primer for Pastoral Care and Counseling: A Commemorative Issue*, Dialogue 88 (Decatur, GA: Journal of Pastoral Care Publications, Inc., 1988).

<sup>5</sup> Zhang and Shaw, "*AMJ*—part 5: Crafting methods."

<sup>6</sup> Shuttleworth, *How to Write a Research Paper*.

<sup>7</sup> Geletkanycz and Tepper, "*AMJ*—part 6: Discussing implications."