

SECTION 3

The Practical Side of Addiction Publishing

CHAPTER 7

How to Write a Scientific Article for a Peer-Reviewed Journal

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All the chapters in this book speak to our aspirations to contribute to addiction science and to have a role in the scientific life of this field. In large part, this role comes through being published in peer-reviewed journals.

Susan Savva (personal communication)

Introduction

A career in addiction science is largely built on reputation and the (perceived) quality of publications that a researcher (or a team of researchers) produces. If these publications are numerous and of high quality, they may lead to research funding and advancement. To gauge the contribution of a researcher to addiction science, fellow researchers may consciously or unconsciously compute the number of worthwhile publications that a colleague has produced in relation to the number of years he or she has published. The greater speed of release for journal articles when compared with books—typically months versus years—means that those who wish to influence their field of study need to publish in peer-reviewed journals to quickly communicate their research results.

This chapter offers the novice author a step-by-step guide to prepare an article for publication. Annotated bibliographies and references listed at the end

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of this chapter suggest further readings worth consulting about specific problems. This chapter begins with the proviso that a good manuscript written by a graduate student or a junior investigator may be highly praised by faculty and colleagues and yet fall short of being publishable. Indeed, editors regularly receive poor manuscripts that are accompanied by a letter from a graduate student saying that his or her professor recommended submission. Yet the praise from a professor or colleagues does not obviate the need for novice authors to scrutinize every aspect of their text to see that it conforms to the demands of a scientific article.

Here, we offer suggestions on how to use the style guide for the journal of your choice (for which there is additional information in Chapter 3), explain how to use a publication manual, and offer step-by-step guidance on the writing process itself. We also offer advice about working with colleagues, writing strategies, and maximizing the worth of your article for your selected journal. Some of the steps mentioned here are described in more detail, and sometimes with a valuable differing viewpoint, in Chapter 12.

This chapter is written for readers who have completed graduate or postgraduate education and have completed a research project that they want to publish in a peer-reviewed journal but who are unsure of some of the basic steps in preparing the manuscript for submission. This chapter is also appropriate for readers who already are proficient in another field of science but want to add articles in addiction science to their list of publications. For this scientist, we advise caution: Terms may have different meanings for the layperson than for addiction scientists. For example, the word *recovery* connotes in the popular press and in everyday life that someone has undergone a course of clinical treatment or perhaps an affiliation with Alcoholics Anonymous. But in addiction science, *recovery* means achieving precise behavioral goals or a given score on a measure and by a given point in time. There are enough such special concepts built around everyday language that scientists new to the addiction field are advised to gather a group of colleagues to advise their research from the beginning.

We assume here that the reader is already competent in writing a scientific article. This chapter aims to fine tune competence in writing rather than to teach the basics of science writing. At the other end of the continuum, researchers whose articles are already often accepted in the journals of their choice will likely find little of interest here. Authors from developing or non-English speaking countries may wish first to read Chapter 4, which explores some of the special challenges encountered by researchers from developing and/or non-English speaking countries.

A successful publishing career means writing for a scientific audience, and authors may have to submit a number of manuscripts to various journals to discover how to do this in a way that results in a high percentage of accepted articles. An early decision researchers must make is whether to work alone or with colleagues. You can work in isolation from colleagues and hope to learn

from rejection letters and from harsh peer reviews (see Chapter 12). Or, you can build an informal team of fellow scientists who are both critical and supportive and who will read and comment on your manuscripts. This is often a quicker, more efficient, and more stimulating path. If you are new to a center or department and you want to sort out quickly who will be supportive of your aims versus who may be less than helpful (e.g., those who have reputations for being always harshly critical or for promising and then failing to read and critique manuscripts), ask people you trust this question: “If you were writing on my topic of _____, whom would you trust to help critique your work in a helpful way?” A novice author can learn much from established authors by passing them drafts for their assessments and their recommendations for getting published.

For a younger or inexperienced writer it may be sensible to check on the acceptance rate of the journals (see Chapter 3) and go for one with a higher acceptance rate. In this way the chances of your paper being accepted are greater.

Writing a scientific article for a peer-reviewed journal can be a creative and enjoyable act. Some people write beautifully and effortlessly, whereas others feel as though they are sweating out each word. But, over time, authors with both writing styles can make successful contributions to addiction science.

This chapter presents one way to write such an article—it is not the only way, of course, but it does offer the advantage of a clear step-by-step method that helps you to plan ahead. If you follow these steps, you will finish with a manuscript worth submitting to the journal of your choice (providing of course that the original science is sound). At the end of this chapter, we also present an annotated bibliography describing other approaches to preparing scientific manuscripts for peer review.

Being methodical, let us start with a checklist.

When you have decided on where to submit your paper make sure you read thoroughly the instructions to authors and follow them precisely. Virtually all journals will now only accept submissions electronically. This may be daunting for the first time a paper is submitted but it makes the process much easier for the journal and the author.

Check the Style Guide for Your Journal of Choice

Each journal has its own specific style configuration, and, to be accepted by a journal, you must write to *its* requirements, not those of another style format and not to your own personal preferences. To do this, have all information on all of the parameters required for the journal that you have (initially) chosen (see Chapter 3 for more information). Many journals offer a one-page style guide. But even the minimal style guides for undergraduate articles issued by university departments typically run to many pages, so clearly a lot will have

been left out of a journal's one-page summary. The *Publication Manual of the American Psychological Association* has 66 pages on style alone (American Psychological Association, 2010, pp. 21–86). Much can be said for simply sitting down and reading at one go these 66 pages for a quick and complete overview of essential topics that are left out of most brief style guides. Read these American Psychological Association chapters and you will emerge an enlightened initiate knowing what topics to be sensitive to even if you must use a different style guide than this manual. The journal you are submitting to may have other style parameters that will affect your article, such as the preferred length of the manuscript and its abstract; gender-neutral or other styles of preferred language; the maximum number, length, and style of footnotes or endnotes; and the maximum size of tables.

Your journal of choice may require or recommend the use of reporting guidelines, depending on the type of paper you intend to write. Even if a journal does not require the use of reporting guidelines, it is worth following or at least consulting a systematic guideline to establish a framework for your paper. There are hundreds of such guidelines in existence, helping researchers to produce accurate, complete, and reliable reports. Table 7.1 outlines some common guidelines.

An additional guideline that was developed in 2016 is SAGER (Sex and Gender Equality in Research), a comprehensive procedure for reporting sex and gender information in study design, data analyses, results and interpretation of findings: <http://www.equator-network.org/reporting-guidelines/sager-guidelines/>

A brief warning about tables and figures: Journals may not specify the size limits on tables and figures, yet these parameters have a huge effect on what information you can include in them and how you organize your writing. Beginning researchers have a tendency to send wider, longer, and less-interesting tables than seasoned researchers. To create tables that will fit the page in those cases where the journal gives no guidance, (a) estimate the typeface in the table when compared to the textual typeface in the journal and (b) build model “trial” tables (one row, the number of columns needed, longest possible data lines per table cell) that would fit within a typeset page. Then build your tables. This alone may save you from immediate rejection or the work of rewriting the text and reorganizing the table. If you have tables that require more than one page, check the journal to see if it publishes tables of that size or check with the editor. Editors have horror stories of good articles that arrive with huge tables that could never fit on a page. (The tricks authors use to create such large tables include using tiny typefaces, margins of less than a centimeter, and rows that run off the edge of the page and the monitor as well as carrying on for several pages with landscape orientation while submitting to a journal that does not accept that format. Do not consider any of these, because you will only infuriate the editor.)

The other problem is tables and figures that are excessive in number or size. These all take up large amounts of space, and this may be a consideration for acceptance of the article. Include only those tables with direct relevance to the article and those that help the comprehension of the work.

Acronym	Full name	Application	Description	Link
CARE	Case Reports	Case reports	Provides a flow diagram for systematic collection of data when seeing a patient or doing a chart review.	http://www.care-statement.org/
CONSORT	Consolidated Standards of Reporting Trials	Randomised controlled trials	Recommendations for reporting randomized trials. There are several extensions, including abstracts, cluster trials, pragmatic trials, and N-of-1 trials.	http://www.consort-statement.org/
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses	Systematic reviews and meta-analyses	Minimum criteria for reporting in systematic reviews and meta-analyses. There are extensions for abstracts, equity, protocols, individual patient data, and network meta-analyses.	http://www.prisma-statement.org/
STARD	Standards for Reporting Diagnostic Accuracy	Descriptions of studies involving diagnostic accuracy or validity	Essential items that should be included in every report of a diagnostic accuracy study.	http://www.equator-network.org/reporting-guidelines/stard/
STROBE	Strengthening the Reporting of Observational studies in Epidemiology guidance	Observational studies in epidemiology, including cohort, case-control studies, and cross-sectional studies	A checklist for articles reporting observational research. There is a draft STROBE checklist for abstracts.	http://www.strobe-statement.org/
TIDieR	Template for Intervention Description and Replication	Descriptions or evaluations involving interventions	A guide for writers to describe interventions in sufficient detail to allow their replication.	http://www.consort-statement.org/resources/tidier-2
TREND	Transparent Reporting of Evaluations with Nonrandomized Designs	Surveys and longitudinal studies	A checklist to guide standardized reporting of nonrandomized controlled trials.	http://www.cdc.gov/trendstatement/

Table 7.1: Guidelines commonly used in reporting health research.*

*For information on more than 280 reporting guidelines, visit The Equator Network: <http://www.equator-network.org/>.

Editors agree that far too many authors ignore the crucial step of reading and following the journal's submission guidelines. Ask yourself, "Am I 100% confident that I have followed *every* one of even the smallest details in the journal's guidelines?" If your silent answer to yourself is, "Hmmm, certainly yes, probably 90% or 95%," then your next step is to conclude that this is not good enough: Go back and fix those few items so that they are correct.

The bottom line: Read and follow the journal's instructions.

Box 7.1: The importance of journal guidelines.

Check the journal's style guide for requirements governing the presentation of figures and make sure that they fit within the journal's page parameters and technical requirements. There is a danger in looking to old copies of a journal to assess table and figure design. If you cannot get a current copy online or at a university library, write to the editor explaining the situation, and the editor—surely pleased at your concern—will likely send a sample copy. Figures are often easily sized by click-and-drag formatting to fit a given space within the correct margins.

Do a Thorough Literature Review

The literature review is a crucial portion of your article. Many beginning researchers have problems with the scope and structure of the literature review. By studying examples of good literature reviews, you can improve your understanding of current standards. See also Chapter 9 on how to write systematic reviews. Wikipedia offers an introduction to the basic points of literature reviews (http://en.wikipedia.org/wiki/Literature_review). Kathy Teghtsoonian offers a useful didactic example explaining alternatives in a review of the literature on smoking (<http://web.uvic.ca/spp/documents/litreview.pdf>). An example of a thorough literature review article that serves as a model for shorter reviews within an article—with exemplary background, definitions of terms and variables, treatment conditions, and results—is this article on quasi-compulsory drug treatment in Germany by Stevens et al. (2005). (But avoid the one-sentence paragraphs frequent in this otherwise fine review. Most editors and reviewers hate one-sentence paragraphs and complain about even one or two.) Cochrane Group reviews also deserve your attention. Not only may a review from the Cochrane Group spark improvements in your research, but reading a collection of reviews can also help you to develop a model for your work. See <http://www.health.qld.gov.au/phs/documents/cphun/32103.pdf>.

Reviewers will be much more familiar with the literature than you are, and, therefore, your literature review needs to be informed and critical, not naive and accepting of all that is cited. One way to improve your literature review is with a step-by-step approach. Have these materials handy:

- all the relevant literature needed to establish the theory or hypothesis that you will examine (it will help you to outline your article and to see what background or literature reviews you need for each section);
- all relevant literature for each of the measures that you have used (the initial article describing each measure and crucial articles describing challenges, alterations, refinements, including statistics on validity, reliability, and all other relevant attributes); and
- all the data needed for your methods, procedures, and results sections (a good way to assess if you need more literature for a given section is to ask yourself, “If I were challenged to support why I chose this [measure, method, statistic], what literature supports my choice?”).

If you are writing about qualitative research for a journal that publishes little of your specialty, be sure to have the latest work on rigor in qualitative research and link it solidly to your work, because the probability is high for a rough ride from reviewers who know little about qualitative research and who may be more biased than they realize. (“I have seen a few good qualitative papers, but very few,” they tell me.) Also, please read Chapter 8, which explains how to write about qualitative research.

Writing Step #1

Contact your chosen journal with a working title and abstract, ask if your article is of interest and relevant to the journal’s mandate, and ask any awkward questions (. . . flexibility on article length? average time for the peer-review process?). Now is the time to learn if your article is acceptable to this journal, not after you have spent days writing an article to a specific format when that journal is unlikely to accept it. If the answer is favorable, you are ready to start writing. If the response is unfavorable, look for another journal. Alternatively, you might consider asking knowledgeable colleagues what journal(s) they feel are the best choice(s) for your article.

Writing Step #2

Now settle down to write for colleagues and your posterity your unique contribution to addiction science. Here are a few specific guidelines for each section of your article:

Title: You should know the overall writing style of your chosen journal well enough to know intuitively what is a suitable title for your article. If in doubt, (a) read the table of contents of several issues to get a feel for their style of titles and (b) make up a couple of possible titles and ask for reactions from colleagues who know this journal well.

Mistakes to avoid: Trendy and cute titles soon look trivial and dated. An editor may allow such a title (especially if rushed), but years from now it will look embarrassing in your curriculum vitae when reviewers read it to determine if you deserve research funding.

Abstract: The abstract summarizes how you carried out your research and what you learned. It is increasingly common and often requested that you use a structured abstract (objective, methods (or) design, sample, results, and conclusion). For example, BMJ (n.d.) requires structured abstracts within a sound framework: objectives, design, setting, participants, interventions, main outcome measures, results, and conclusions.

Mistakes to avoid: Do not go beyond what is established in your article: Offer no nonsignificant results, no speculation. Do not use telegraphic style (e.g., omitting articles and other parts of speech to achieve brevity) unless allowed by the journal. Do not go over the abstract size limit set by the journal.

Introduction statement: A good introduction tells the reader why the article is important in terms of the problems to be investigated, the context for the research question, what place this research question has in understanding addictions, and what is original about the endeavor.

Mistakes to avoid: Do not simply describe the substance or behavior under study. Authors who see this as sufficient too often feel that the problem substance or behavior itself implies what research is needed. This is almost never true. At no point should the volume of loosely related information make the reader feel lost and wonder, “Why is all of this information here?” Avoid archaic arguments that have been resolved or that are not pertinent to your

A frequent mistake made by beginning researchers is to not make clear to the editor and reader what is the *original* contribution of an article. It is easy to forget that scientific journals exist only to publish original knowledge. Describe the originality of your research analyses in your initial letter to the editor to see if there is interest in your article so that if the article later appears on the editor’s desk, he or she will remember it for the innovative understanding that it offers. For the reader’s benefit, your original contribution(s) should be clear from the title (if possible), mentioned in the abstract, and described in the introduction and in the discussion (and/or conclusion).

Box 7.2: The importance of originality.

article, even though you may have spent months researching these and you have a fascinating solution to the debate. Avoid formulaic first lines: A sentence such as “Access to legalized gambling has increased greatly in the last two decades” begins at least one third of articles on gambling. An occupational hazard of editing is to receive by the dozen manuscripts with opening lines such as “Alcoholism (or drug dependence or tobacco use) is a significant public health problem.” The editor’s eyes glaze.

Literature review: The literature section of a dissertation is an entire chapter. For an article, it should briefly summarize only the most important references that lead directly to understanding the importance of your article and the methods used. Keep the topics of your literature review grouped so that the flow is logical and the reader does not have to move back and forth. Move from the general subject to the more specific studies relevant to your research question. For detailed guidance on which articles to cite, refer to Chapter 10 (Use and Abuse of Citations). For detailed information about how to use state-of-the-art search technologies to locate articles relevant to your literature review, see Appendix A. When your draft is completed, compare it with the literature reviews in your journal of choice.

Mistakes to avoid: If several authors have been involved in writing the literature review, then it is likely to be too long and detailed, because each author tends to add what he or she knows are essential works. Keep the review concise.

Method: After readers have gone through this section, they should know the research methods in such detail that they could replicate the study in full with another sample. One way to check the completeness of this section is to have colleagues read it and ask them to verify if they could carry out this research project wholly from the methods section. If there are previously released articles using the same methods—whether your article or those of others, and especially if the method is described in more detail elsewhere—then you should cite these. This may allow you to shorten the method section.

Mistakes to avoid: If some aspect of your methods is suboptimal, it is better to mention it here with the comment “see the limitations section” and then be straightforward in the limitations section. Do not try to hide or disguise poor methods; reviewers will pounce on them. If your research involves randomized control trials, editors may refer you to the CONSORT Statement promoting high standards and uniform methods: <http://www.consort-statement.org>.

Results: Here you describe the outcome(s) from your research. Double check that each novel finding mentioned in the discussion is reported here.

Mistakes to avoid: This section especially lends itself either to over-writing (excessive detail beyond what is needed for analysis, excessive weight given to nonsignificant results) or to under-writing (cursory attention to important aspects and variables). Avoid reporting results as “approaching significance”; if they are not statistically significant, do not quote them as a near result. A mistake to avoid here is opening the results section with a description of the sample or an analysis that is more relevant to the methods, such as the validity of your measures. Start your results section with the main findings. Beginning

researchers often take up too much of their manuscript with nonsignificant results; be ready to drop a result that colleagues or reviewers suggest is unimportant, even if it seems like a wondrous and magical thing to you.

Discussion and/or conclusion(s): Describe how your specific results fit into the world of addiction science. You may address issues raised in the literature review, address policy issues, or raise new questions that are either unaddressed or rarely addressed by others.

Mistakes to avoid: A little speculation is allowed, but limit it and ask your supportive colleagues what they think. Restrict your discussion of your future research plans to a line or two. Some authors like to end with the trite conclusion “More research is needed.” It always is. If you wish to write in this vein, be as specific and creative as possible in tracing what original work needs to be done and what interesting hypotheses it will test.

Limitations: Describe in brief detail the suboptimal aspects of your research. This newish trend has come as a result of demand for more transparency in research publishing. Junior authors are often afraid that being open about the limitations of their research will create prejudice against an article. In fact, the opposite is true. Senior researchers (i.e., editors and reviewers) will see flaws in your work that you will likely not see. Reviewers and the editor ask only that you acknowledge limitations. To do so is not a sign of weakness in you or your approach, but much to the contrary: It shows that you are an author who is on top of what are best practices and that you are a person who sees the need for better methods (as opposed to one who stumbles along pleased with his or her inadequate work). In concise, simple, and unapologetic language, describe the shortcomings that kept your work from being optimal. Some journals allow an author to note limitations throughout the text (i.e., not as a subheading toward the end of the article). You may wish to check to see if your journal of choice allows or prefers this alternative.

Mistakes to avoid: Do not be ingratiating (e.g., do not apologize, promise to avoid these mistakes in the future, or offer excuses), for this creates the impression of servility. You are not groveling. You are only signaling to your peers that you know what is better practice in research.

References: It is easy to forget that the function of references is to allow any reader to retrace the evidence you cite. Electronic sources that become unavailable threaten this openness. You must check that all the references in the text are cited in the reference section and that all the references in the reference section are cited in the text. Too often, authors neglect to check this, and these mistakes may be found by reviewers. You should be completely fluent in the minute details of proper reference style for your chosen journal. Too many errors tell the editor that an author has been careless, and this suggests carelessness perhaps elsewhere.

Mistakes to avoid: Verify if translation of foreign language titles is required. If it is, translate foreign-language titles even in the first version you send to the editor.

Appendices: If your journal of choice seems not to have published appendices, then check with the editor to see if they are allowed. Appendices represent an excellent solution to the problem of presenting background information (e.g., legislation, policy statements, questionnaires and measures, speeches, protocols) that is too long for the body of the article. They are also easy for a reader to skip: a blessing. Online, some journals allow for the posting of appendix materials such as video and sound files, and URL access, as well as more traditional yet space-consuming items that are difficult or impossible to include in print journals. Note: Such data may not have peer-review status if not evaluated by the reviewers.

Mistakes to avoid: Omit appendices that you feel are relevant to the article but that colleagues feel are not pertinent.

Writing Step #3

You have written this first version early enough to allow you to circulate it to several colleagues whom you can trust to read it and to offer prompt and fair critiques. Once you have their feedback, consider if their assessments warrant rewriting before submitting it to your chosen journal.

Writing Step #4

Submit your article to the editor. It might be useful to read Chapter 12 on manuscript preparation at this point. Bon voyage on this first step in becoming a contributor to the world of addiction science.

Writing Step #5

Your article has been accepted for review (whether minimal or extensive) and has come back with the reviewers' and the editor's comments. This would be a good time to consult Chapter 12, which describes referees' reports and how to respond to them. If you decide the referees' criticisms are too severe for you to answer, then write the editor to tell him or her so and provide your precise reasons for not revising your article. This accomplishes several good things to your benefit: (a) It labels you as someone who takes editing a journal seriously, who knows his or her goals, and who does not let work slide; (b) it signals to editors how serious the criticisms were and may lead them to discuss options with you; and (c) they will remember you as someone who did not leave them hanging and wondering if that article was ever coming back.

If you decide to revise your article, you have several choices. Authors should not see themselves as helpless in the face of reviewers' comments. To reassure

authors of their rights, we at our journal send the following paste-in text to even experienced researchers.

As we tell all authors, a reviewer's comments are *not* orders that have to be carried out. To the contrary, for each point that a reviewer has made, an author has these three options:

- (a) discuss/debate/refute a reviewer's comment(s),
- (b) rewrite the text in response to a comment(s), or
- (c) a combination of these so that an author both discusses/debates/refutes a reviewer's comment(s) and rewrites to accommodate some comments by a reviewer.

In many of the articles that you see in print, there are several points that appear just as authors intended, because they debated and defended their approach as written. As editor, I sometimes very much give the author the benefit of the doubt.

The last point in answering the reviewers' comments is practical but often overlooked. Be crystal clear in accounting for how you responded to each point made by each reviewer. It is a good idea to provide in a letter to the editor the responses you have made point by point to the reviewers comments and to use track changes in the text of the article.

If your article is rejected, then carefully read the critiques and see if you feel that submitting it to another journal seems a wise step. If so, be sure to format it thoroughly to that journal's style and revise it in response to the reviewers' criticisms. It is worth remembering that if your article is rejected and you submit it to another journal, it may be sent to a reviewer who has already rejected it.

Writing Step #6

Once your article is accepted, you may have little more involvement until the editor or publisher sends you the proofs to check. When the proofs arrive and you see how the nuances of your careful writing style have been altered, it is easy to feel lonely and unappreciated. But please respect that copy editors know well what is more readable and credible to the target audience. If you have a hard time deciding on whether to accept a change or not, a criterion is to ask yourself is, "Has my meaning been respected or has it been changed?" If it has been respected, then let it be as edited and trust the copy editor. If you read your article a year later, you will usually see the wisdom of the copy editor's changes.

Publishing Dissertations

Most postgraduates who have successfully completed a master's thesis or doctoral dissertation will want to have their findings published. (Chapter 5 treats this topic in more detail.) It is important to remember that these dissertations are usually much longer and more detailed than will be required for publication as an academic article. Think carefully about how many articles your dissertation can be split into: Often a doctoral dissertation has enough material for three or four articles. Do not replicate exactly the methodology or literature review (this will be seen as self-plagiarism; see Chapter 14), and keep the methodology as simple as is necessary to explain what you did. Often the methodology in dissertations is much more comprehensive than is required for an academic article, keep it to what is needed to explain your procedure. Editors will get frustrated when presented with an unedited dissertation and may reject it before sending it for review.

When writing up a dissertation for publication it is important to bear in mind who should be included as authors (see Chapter 11 for discussion of how to assign authorship credits) and appropriate acknowledgement of supervision etc.

Conclusion

When your first addiction article is published, you will have made a contribution to the addiction sciences and to the public arena where the dialectics between what is, what could be, and what will be are in struggle. A proverb: some Inuit say that a man can be only as good a hunter as his wife's sewing will let him be. In the addiction sciences, the effectiveness of our research, treatment methods, policies, and advocacy can be only as good as the literature that we publish.

For Further Reading

Boxes 7.3 and 7.4 describe resources for improving your scientific writing in general (writing style and motivation issues) and in particular areas, respectively. If they do not contain a work specific to your needs or the books are unavailable, try searching your local university or professional library using terms such as *scientific writing* or *publication manual* in a title or subject search.

Yet another technique is to find the library classification codes (call numbers) at your nearest university for books on writing psychology and biomedical science (e.g., in academic libraries using Library of Congress call numbers, they are mostly among the books labeled with H61 (social

Alley, M. (1996). *The craft of scientific writing* (3rd ed.). New York, NY: Springer.

- Lengthy chapters on building competence and curing shortcomings.

Greene, A. E. (2013). *Writing science in plain English*. Chicago, IL: University of Chicago Press.

- A short, focused guide presenting twelve writing principles based on what readers need in order to understand complex information, including concrete subjects, strong verbs, consistent terms, and organized paragraphs.

Matthews, J. R., & Matthews, R. W. (2014). *Successful scientific writing: A step-by-step guide for the biological and medical sciences* (4th ed.). Cambridge, England: Cambridge University Press.

- Step-by-step advice helps researchers communicate their work more effectively. The fourth edition has been updated to provide more guidance on writing and organizing each part of the manuscript's draft.

Rogers, S. M. (2014). *Mastering scientific and medical writing: A self-help guide* (2nd ed.). New York, NY: Springer.

- A compact guide with exercises as solved problems; good for overcoming specific writing handicaps. It also addresses issues troublesome to authors of a non-English language origin. This second edition answers questions resulting from new developments in scientific communication.

Silvia, P. J. (2007). *How to write a lot: A practical guide to productive academic writing*. Washington, DC: American Psychological Association.

- This breezy guide is especially good for authors who realize that their writing style needs improvement or who have been told that a component of their article (e.g., abstract, introduction, method, or discussion,) misses the point of what it should communicate. Journal articles have 23 pages of coverage in this book.

Strunk, W., & White, E. B. (1999). *The elements of style* (4th ed.). New York, NY: Longman.

- Still one of the best and shortest writing guides, easily read and absorbed. Those learning English find its clarity and brevity helpful. The 1918 edition by Strunk is available for free as an e-book from Project Gutenberg at <http://www.gutenberg.org/ebooks/37134>.

West, R. (2002) A checklist for writing up research reports. *Addiction*, 95, 1759-61.

- This is an advanced, comprehensive guide to scientific writing prepared by the Editor of one of the leading addiction journals.

Box 7.3: Annotated bibliography of scientific writing: basic problems of writing style and motivation.

Goldbort, R. (2006). *Writing for science*. New Haven, CT: Yale University Press.

- This book offers detailed chapters cover every type of science writing by using numerous examples. The author discusses how to approach various writing tasks as well as how to deal with the everyday complexities that may get in the way of ideal practice.

Gustavii, B. (2003). *How to write and illustrate a scientific paper*. Cambridge, England: The Cambridge Press.

- This work is oriented to the biological and medical sciences. It is the clearest and most succinct work that we found among all such works at our local university. A marvel of clarity and utility. It is also full of relevant URLs for up-to-date information.

Huth, E. J. (1990). *How to write and publish papers in the medical sciences* (2nd ed.). London, England: Williams and Wilkins.

- This compact work offers practical advice on how to make decisions about what to write and what to leave out for both novice and experienced researchers. A highly readable source.

Miller, J. E. (2005). *The Chicago guide to writing about multi-variate analysis*. Chicago, IL: University of Chicago Press.

- This work shows how specific the aids available to scientific authors are. The book is a mini-course in writing about numbers (i.e., statistical analysis).

Schimmel, J. (2012). *Writing science: How to write papers that get cited and proposals that get funded*. Oxford, England: Oxford University Press.

- This book is built upon the idea that successful science writing tells a story. The author discusses every aspect of successful science writing, from the overall structure of a paper or proposal to individual sections, paragraphs, sentences, and words

Box 7.4: Annotated bibliography of scientific writing: focusing on standards for scientific articles and specific scientific areas.

sciences), Q158 (biomedical sciences), R119 (biomedical sciences, and T11communication)), and then scan the shelves in those sections for books that did not come up in your title or subject search. Some would call this a strategy of desperation, but half of the books in the annotated bibliographies below were found this way.

Finally, most academic libraries offer so called LibGuides, i.e., special research guides on scientific writing that are not just for students. Advanced guides include a collection of links to invaluable print resources in house and

links to authoritative and reputable online options on the Internet. Here are a few examples, all from the USA:

- Michigan State University – <http://libguides.lib.msu.edu/medwriting>
- Duke University – <http://guides.mclibrary.duke.edu/scientificwriting>
- Wilkes University – http://wilkes.libguides.com/scientific_writing
- University of California San Diego – <http://ucsd.libguides.com/psyc>
- Bowling Green State University – <http://libguides.bgsu.edu/techwriting>

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Please visit the website of the International Society of Addiction Journal Editors (ISAJE) at www.isaje.net to access supplementary materials related to this chapter. Materials include additional reading, exercises, examples, PowerPoint presentations, videos, and e-learning lessons.

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Appendix A. How to Locate Articles Relevant to Your Literature Review

No matter how easy it seems to Google your topic, the scholarly article you are writing deserves a more in-depth literature search than Google or even Google Scholar provides. On the other hand, it would be very time consuming to check individual journals for relevant articles, even though in certain cases the majority of the pertinent articles seem to have been published in a handful of journals. The purpose of scientific databases is to aggregate all publications from a variety of

journals in a single database on a particular topic, such as PubMed and Medline on biomedical and health science and PsycInfo on psychology. These databases abstract and index every article published in the journals in their coverage, making the scientific content easily discoverable through literature searches. Since currently there is no single and comprehensive database in the field of addiction science, expect to spend a significant amount of time searching scientific databases with various scopes. Please see the more general discussion of relevant databases and abstracting & indexing services in Chapter 3.

A literature search can also serve as a great start to conceptualize the topic of your article, since in order to run your search in a database, you will first have to produce a list of search terms. Searching is a skill that can best be learned with the help of a professional searcher. Before you start your literature search, please consult your librarian on the latest trends and, if possible, schedule a one-on-one session to find out which databases are available at your institution and what search strategies would work the best in those resources.

Choose the Right Database

The first step of the search process is choosing the appropriate databases. The best way to start is by reading the description of a database to define the type, scope, and coverage of the resource. For example, the Rutgers Alcohol Studies database is a collection of bibliographic records for books, book chapters, journal articles, government documents, conference papers, and dissertations. Although you will not have access to the full text of any document, you can use the reference to find it elsewhere. The Rutgers Alcohol Studies database is a very comprehensive database; discontinued in 2007, it can be considered an excellent source of articles written before 2007. Other useful resources include the Alcohol and Alcohol Problems Science Database, or ETOH, discontinued in 2003, and the CORK database, updated until early 2015.

Because there are currently no comprehensive databases for the addiction field, resources such as Medline or PsycInfo will usually provide the best results at the beginning of your literature search on any addiction science-related topic. Searching a major database also comes with an additional bonus: if your institution subscribes to the journal and has an article linker software application in place (most academic libraries do), you will have instant access to the full text of those articles.

Build Your Search

Search interfaces vary depending on the platform your institution provides (e.g. Ovid or EBSCO). Spending 45–60 minutes with your local librarian can save you precious time to locate the most important features of the databases

and can allow you to focus on the search strategies. In a nutshell, it is highly recommended to use the “Advanced” search option, if possible, in any database on a platform where you perform your search in multiple search boxes (e. g. EBSCO platforms, Academic Search Premier). It’s important to be comfortable using the Boolean operators, truncation, and wildcards, and familiar with the concept of controlled vocabulary, mapping, and the thesaurus. Each database defines its own preferred terms; for example, Medline, PubMed, and PubMed-Central (reiterations of the same collection in slightly different formats) use Medical Subject Headings called MeSH terms, the controlled vocabulary the US National Library of Medicine uses for indexing articles. Another notable collection of terms is the Library of Congress Subject Headings used by academic libraries, book publishers and Academic Search Premier, a software application originally designed to allow similar titles to be placed physically close to each other on the shelves of brick-and-mortar libraries. For example, “marijuana” is the preferred term in PsycInfo, while Medline uses “cannabis” as an index term. A keyword search usually searches the full text, for example, searching for the word “ganja” as keyword anywhere in an article. A useful feature of the Ovid platform is “mapping” your term to these preferred terms to achieve a high precision of search results. The Ovid platform also prompts you to build a search line-by-line (or term-by-term), resulting initially in an alarmingly high number of hits. Then, using the Boolean operators AND and OR, you can modify and combine your search with additional terms in as many ways you want to filter articles. Each database offers a variety of filters, such as date range, populations and document types, which are essential in the search process.

This comprehensive search strategy will retrieve the relevant articles that were indexed by a subject heading or a descriptor matching your concept. Other searches may target certain parts of the articles the database defines as searchable, such as the author, title, abstract, and keywords, usually in a single search box. This type of search is perfect to locate known items, i.e., to find an article written by an author knowledgeable about your topic, or to retrieve the full text of an article discovered earlier. It should be noted that sometimes old-fashioned methods, such as “footnote chasing” or finding a good review article on your topic, may result in unexpected breakthroughs in your literature search. Many novice searchers take screenshots of their most successful search strategies for future reference or documentation, since most databases do not allow you to save your search and return to it.

Benefit from Citation Management Software Applications

It’s a good idea to save the results of each search, i.e., the bibliographic records and/or the full texts of the articles, in a citation management software

application. Many authors rely on these applications, such as the proprietary EndNote and RefWorks, or the open source Zotero.

These applications serve multiple functions in the process of conducting research and sharing results in a publication. They are integrated with most of the platforms content providers use for databases and individual journals so that researchers can immediately download the metadata, including links to the full text, of several articles retrieved during the search. They can then share them with collaborators, and can finalize which ones to cite in the article to be published. The in-text citation function, such as Write-N-Cite in RefWorks, allows the author to insert placeholders in paragraphs that serve as the basis of the reference list at the end of the article in the format required by a particular journal, such as APA first author/year or numerical style. Most major citation styles are built into most citation management software applications as output styles. Authors who create their own lists and folders of articles to be cited will benefit from the convenience of creating a list of references, endnotes, or footnotes with one click of a mouse. Should the article be rejected, there is no need to reformat the in-text citations and the entire bibliography to match the required style of another journal. All that needs to be done is to change the output style in the citation management software.

