

The Peer Review Process as it Relates to Dental Hygiene Publishing

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The review process of peer evaluation of research papers builds better articles for readers and strengthens the analytical skills of writers.

When I first started in academics, I had little writing experience. I had joined the dental hygiene faculty at the University of North Carolina on a tenure track, and was expected to begin conducting original research and writing in peer-reviewed journals. One of my first writing endeavors was a literature review paper on faculty calibration. At the time, the former editor of the *Journal of Dental Education* was a faculty member at my institution. He was teaching short courses on how to write papers for publication, so I decided to take advantage of his experience. During the course, I asked him to critique my paper before I sent it to *Educational Directions*, a former publication of ADHA.

I will never forget how the paper looked when he returned it to me. It looked as though it had been an editing nightmare! It had been torn apart! After I recuperated from the initial shock, I took the draft and revised it according to the suggestions he made. I sent it to him for review once again. Red ink once again appeared on that second revision. By the time I finished writing that paper, I learned to appreciate a critical review of my work and the process it takes to improve writing skills. To this day, I show that paper to my beginning graduate students so that they will know we all had to start somewhere!

The beginning writer needs the critique of others to grow in his or her work. This process takes an ego adjustment! The primary reason for the critique process is to improve research papers and ensure the accuracy of content and clarity of that piece. These are the primary functions of the peer-review process in a scientific journal. It is our job as reviewers to make certain that research is in the best possible form before it is published. In the long run, the process of critique builds stronger writers and offers the best quality research for our profession.

This is the third article in a series describing the process of conducting research and getting it published. The first article

shared how research is conducted, the dental hygienist's responsibility to read new research and what types of research can be found in the pages of the profession's top publications. The second article reviewed the elements of a research article and how a dental hygienist may evaluate this material. This article will discuss how research articles get published so that dental hygienists may understand the process and the importance of peer review.

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Selecting a Professional Journal for Publication

Research journals, such as the *Journal of Dental Hygiene (JDH)*, report original scientific discovery and extensive literature reviews on topics of importance to the profession. A research journal publishes the results of original investigations derived empirically using the scientific method.¹ As was explained in

the previous article, it is important to know how articles are reviewed in a scientific journal before you commit to writing for the publication. Are articles in the publication based on an author's opinion or on scientific evidence? If an article is based on a product or procedure to use on your patients, I encourage you to review the scientific evidence that has been published about the product or procedure.

The publications in which papers are reviewed by professionals on a scientific review board before they are printed are referred to as peer-reviewed publications. Editorial board members or peer reviewers analyze articles found in their area of expertise and either accept or reject them for publication.

If you are a clinician/reader, a peer-reviewed publication can save you some time. When you read these publications, you know that experts have already examined the research model, statistics and outcomes for accuracy of content and clarity. Although this does not always guarantee that the article is of great quality, it is one step in the attempt to identify accurate information. For writers, the peer-review process ensures that a paper is in excellent form to be read and received

by the reader. This process helps to develop a writer and adds credibility to their work.

Types of Articles that Appear in Professional Journals

How does a writer contribute to a professional peer-reviewed journal? One way is through a letter to the editor. Have you ever read an article and wanted to make a public comment about the content? Readers often feel compelled to share their view and/or ask further questions about the subject.

One should not be intimidated by writing such a piece, but follow a few simple guidelines to ensure that it gets published. First, identify a topic of interest to you. Then discuss this topic in a new way and present unique solutions to the problem.² Carefully follow the submission guidelines for letters to the editor, which are usually available in the publication. As the editorial staff may have to edit your letter for length, include your major points within the first few paragraphs.

Do not forget to check your spelling and proofread the letter. You may consider having a colleague review it for accuracy and clarity. Sign your name and include your phone number and address if required, before mailing, faxing or emailing your letter to the address listed for the publication.

Other publishing topics that the dental hygienist may read, but might also write, include current opinions, viewpoints or current happenings. We all hold opinions of trends in the industry, views in our profession or research results that have been published. It is important to add your voice to the forum of professional opinion. We have an obligation to contribute from time to time in the form of a short article discussing these areas.

It is important to state your point early on in the paper and make it clear.³ The first few sentences should reveal your topic and your credentials for expressing an opinion or viewpoint. If writing about systemic disease issues, share that your dental health practice specializes in periodontal treatments. If writing about whitening practices, mention that you have 10 years of experience in a cosmetic dental practice. Then expand and support your viewpoint.

Another type of article found in a professional journal is the review of the literature, which is an account of what has been published on a topic by acknowledged scholars and researchers.⁴ The purpose of the literature review is to convey to the reader what knowledge and ideas have been established on a topic, and the strengths and weaknesses of that research.⁴ The literature review must be defined by a guiding concept (e.g., your research objective, the problem or issue you are discussing, or your argumentative thesis). It is not just a descriptive list of the material available, or a set of summaries. The piece must be organized around and related directly to the research question developed, synthesizing results into a summary of what is and is not known, identifying areas of controversy in the literature, and formulating questions that need further research.⁴ In producing a paper such as this, the writer

must consider what specific thesis, problem, or research question his or her literature review may help to define.⁴ A recent example of a literature review that was published in *JDH* is "Oral Malodor: A Review of the Literature."⁵

Professional journals also publish the abstracts of research articles that have been presented or are scheduled to be presented at professional meetings. As we described in the second article in this series, the abstract gives a complete overview of the article, stating the purpose, methods, results and conclusions. When writing or reviewing abstracts, ensure that they include a complete overview of the article, stating the purpose, methods, results and conclusions. For an example, review the complete list of abstracts in the *JDH* January 2006 issue.

Case reports are articles that demonstrate how a specific clinical situation was initially identified, which solution was selected to resolve the issue, and a summary of the final results.⁶ Frequently, clinicians will publish a case report on an interesting or unusual case diagnosed and treated in an academic setting or a private dental practice.

A book review should be written so that a professional who has not read the book will be able to decide whether or not to read the book or adopt it for a class (in the case of an academician).⁷ Bibliographical information about the book, including the author(s), title, publishing information and date, should be included in the review as well as a general summary of content and a discussion of the author's main point (why the author wrote the book/article; what point(s) are being made?).⁷ Writers must identify the author's main arguments and conclusions in the book, identify at least two of the book's problems or strengths, and then make recommendations about the publication.⁷ Examples of book reviews can be viewed in the July 2006 issue of *JDH*.

With any piece of writing, it is the author's responsibility to carefully observe grammar and spelling conventions as well as the publication's guidelines to ensure that the work conforms to the publisher's specifications. Guidelines ensure a consistent publishing platform for the publication and offer greater clarity and comprehension for the reader. When a writer submits a paper with an inconsistent format, it can be a red flag to the reviewers that the author has conducted sloppy work. It will slow the process or possibly render the article unpublishable.

Working Together in the Publication Process

The writer is only part of the publishing process. Other participants include the editorial department, composed of individuals and teams that work both inside and outside the offices of the publication. The editor, editorial review board, and editorial staff play important roles in bringing an article to publication.

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For most scholarly journals, the editor and editorial staff conduct a quick first review to determine how well the paper is organized and which reviewer's expertise will be needed to thoroughly critique the article for clarity and accuracy. The editor and staff maintain editorial calendars; that is, listings of topics assigned to each issue of the publication, as well as the publication's calendar of deadlines. Editorial staff keeps writers and reviewers informed of coming deadlines and reviews the finished work of both parties.

Typically, peer-reviewed publications have an editorial review board that conducts blind reviews of manuscripts. Each reviewer or group of reviewers takes on articles published within their area of expertise. The 30 to 40 reviewers engaged by *JDH* range in expertise from clinical, educational and health services to infection control issues, periodontal disease and instrumentation research. The reviewers typically possess a wealth of writing experience and serve a three-year term or longer on the review board. During their tenure, the board members agree to review up to, but not more than, four to six manuscripts a year. The reviewer's responsibility includes submitting thorough, constructive feedback to the author. If the reviewer is assigned an article, and they have a conflict of interest (e.g., can identify the authors; have previous knowledge about the paper or research, etc.), the article is then assigned to another reviewer. In other words, the process should be as "blind" as possible.

In the course of a review, each submitted paper will be reviewed at least once, typically twice, in the process. It is important to note that the review process was not established to discourage new authors, but to ensure that final published pieces reach their audience and clearly communicate important information about our profession.

Summary

If you decide to publish an article in a peer-reviewed journal, an understanding of this process will assist you in knowing what to expect from the process of submitting material for publication. Even readers can benefit from understanding the lengthy process the author, editors and reviewers undertake to ensure that the best data possible is presented in a clear format. Personally, I have a much higher level of respect for writers since I have knowledge about what they go through to get a paper published in a peer-reviewed research journal.

As a writer, be prepared for constructive criticism. The critiquing process will provide a critical review of your work that will not only protect the reliability and reputation of the publication, but also encourage you to grow and improve your writing style. Since that first paper I mentioned at the beginning of this article, I went on to publish more than 70 other articles and am now in the process of writing a book. None of that would have been possible without experiencing the critiquing process. It is a talent-building process that further develops your writing and critiquing skills.

The dental hygiene profession benefits from reading and writing in high quality scholarly, scientific publications. It is our responsibility to share the information we gather with our professional community and with our patients. I hope you will consider contributing to the growth of our profession by reading quality publications and/or contributing in the writing process.

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Recommended Reading

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