

Editorial for July JSPN (19:3)

Learning Peer Review: Is Jumping into the "Deep End" the Best Approach?

Search terms: Ethics, nurse education, peer review

Peer review is the essence of scholarship, embodying unique disciplinary expertise and the altruism to painstakingly enhance a manuscript for an anonymous author. In fact, peer review has been termed "a gift of uncompensated time from scientists to whom time is a precious commodity" (Scott-Lichter & the Editorial Policy Committee, 2012, p. 5). Peer review is a learned skill evolving as scholars and clinicians become comfortable in their "professional skins." And, like all learned skills, peer review must begin somewhere, with novice skills preceding expertise. Given the critical nature of peer review to advance disciplinary art and science, it is remarkable that formal education in this area is largely absent.

As Shannon Scott and I discussed our own training in peer review, we agreed that we learned by jumping into the deep end and doing it – that is, by being invited to do a review (either because of clinical expertise or research focus), taking the job seriously, employing research and clinical knowledge, and continually comparing our reviews to those of more experienced scholars (as when editors attached all the reviews to their decision notice). We each had mentors who guided us when they could but, like most of our peers, we had no formal education in this important aspect of scholarship. We benefited from receiving expert reviews on our own manuscripts and grants. We learned the attributes of helpful and less helpful reviews and came to greatly appreciate reviewers' expertise. We also learned about peer review through our experience on editorial advisory boards (e.g., discussing editorial decisions and reading countless reviews). One of JSPN's most expert reviewers shared with me recently that her first review was rejected by the editor without any explanation. Today she is in demand by more than a

dozen journals for her review expertise but her early experience exemplifies the downside of learning solely by doing.

Concern for publication ethics may be one reason peer review is so often missing in formal education. We suspect many peer reviewers have wished they could involve students in critiquing manuscripts but are prevented from doing so by the confidentiality of the peer review process. Increasingly, questions about publication ethics are being referred to formal ethics bodies such as the Committee on Publication Ethics (COPE) and the Council of Science Editors (CSE). The CSE's 2012 update to their *White Paper on Promoting Integrity in Scientific Journal Publications* is one of the most comprehensive sources available. Yet, within this detailed, 81-page guideline, no specific instruction is available on the ethics of using submitted manuscripts for teaching peer review. The authors of the white paper suggested editors are responsible "to protect the confidentiality of every author's work" (Scott-Lichter et al., 2012, p. 2), "sharing it only with those involved in the evaluation, review, and publication process" (p. 9). Their instruction to reviewers includes advice not to share or discuss the material under review with anyone "outside the review process unless necessary and approved by the editor," further explaining that a reviewer who is unsure of policies for "enlisting the help of others in the review process" should ask the editor (p. 32). This scant guidance leaves much to interpretation and begs the question of whether peer review must or should be taught without hands-on experience with submitted manuscripts.

A didactic course on peer review could perhaps rely on the ample literature in this area. For example, there are many articles about the nature and conduct of peer review (e.g., Baggs, Broome, Dougherty, Freda, & Kearney, 2008; Foster, 2008; Pearson, 2014; Witham, 2014). Guidelines for reporting research provide another element for judging the appropriateness and accuracy of results (Foster, 2012). Sources on writing for publication (e.g., Webb, 2009) could be used to critique the

composition and logical development of an article. Expertise in one's specialty is brought to bear when the reviewer considers whether new work furthers science and/or practice in the field. An innovative faculty member could expand measurably on these beginning suggestions. The question remains, however, whether one can learn without actually doing and whether there is an appropriate way to involve students in the actual peer review process.

To answer that question, Shannon Scott, a member of the *JSPN* Editorial Board, contacted me in the fall of 2013 to ask if she might involve two graduate students in peer review. Dr. Scott explained that she would be the reviewer of record but, with my permission, would allow the students to also read and critique the manuscript. Considering that CSE instructs reviewers to ask the editor about involving others in the review process (Scott-Lichter et al., 2012), I granted her request with her assurance students would receive faculty mentorship and instruction about confidentiality.

The two students involved in this learning experience were pediatric nurses near the end of their graduate program. They were enrolled in a research practicum course at the University of Alberta for students in the Master of Nursing program specializing in research. In this course, students work with a faculty researcher (mentor) to develop an individualized research practicum proposal that outlines specific objectives to be met during the course (e.g., acquisition of particular research skills, participation in particular types of research activities). Over the course of the four-month research practicum, students complete at least 130 practicum hours and meet with Dr. Scott (as course lead) each week for a two-hour seminar. At the start of the course, the students and Dr. Scott agreed on topics for the seminar (e.g., planning for data analysis, publication, peer review, developing a research program, and determining a research career). These two students were particularly interested in learning peer review.

Didactic preparation for the hands-on review included a two-hour workshop. Students read articles like those by Pierson (2011) and Moher and Jadad (n.d.). During the workshop, Dr. Scott shared and discussed peer reviews of her own manuscripts to illustrate the most helpful aspects of a review, including tone, specificity, and knowledge of existing science. Confidentiality of the peer review process was emphasized including the fact that reviewers must not discuss with others, nor benefit in any way from, the manuscript materials. Once the students understood confidentiality, each was provided a manuscript that had been submitted to *JSPN* and that was relevant to her clinical expertise and research knowledge. Students had one week to prepare individual manuscript reviews. During this time, Dr. Scott also prepared a review of each manuscript. The students subsequently met with Dr. Scott to compare their reviews with hers and to collaborate on the reviews that were then submitted to *JSPN*. When Dr. Scott received notice of the *JSPN* editorial decision on each of the manuscripts (containing a copy of all reviews), she and the students discussed the ways in which the student/faculty review compared with reviews of other experts and how the reviews supported the editor's decision. Both students said that this learning experience was one of the best in their graduate program.

Following the success of the Fall 2013 experience, we replicated the experience with two other graduate students in Winter 2014. This time both students independently reviewed the same article and then compared their reviews with the one written by Dr. Scott. Having both students review the same article provided additional comparison and enhanced discussion of the strengths and limitations of the manuscript. Again, Dr. Scott shared with the students a copy of all three of the reviews submitted to *JSPN* and the students discussed their submission in relation to those of other experts. Following Dr. Scott's discussion, I provided the students with a detailed explanation of how each of the reviews contributed to my decision on the manuscript. Serendipitously, I found this process very instructive myself. After many years in the editor role, certain aspects of decision-making become intuitive and there is distinct value in examining the decision-making process. In this latest experience, I felt I had

contributed to the students' learning and Dr. Scott indicated the students were enthusiastic about the learning experience. In both situations the students produced very detailed reviews, learned how to provide critical feedback with a supportive tone, and commented about ways in which this process will enhance their own writing.

Not surprisingly, the students felt they learned much more by going through an actual review process. They stressed the importance of the graduated process of conducting a peer review independently, then having the opportunity to discuss their reviews, and to work with Dr. Scott to construct a composite review that captured the critical pieces of each individual review. The students stressed how the "safety net" of working with an experienced peer reviewer was important for their learning and gave them the confidence to conduct a review. They also commented that the circle of learning was completed when they were able to read the other expert reviews of the manuscript. In answer to the question of whether students can be appropriately involved in the peer review process, Dr. Scott and I are convinced that editor approval, faculty/editor collaboration, and close faculty mentorship can provide a valuable learning experience. Importantly, our beginning collaboration invites other editors and faculty to expand on our experiences. For example, by virtue of their longer programs of study, students in DNP and PhD programs could receive more instruction than might be possible for master's students. Peer review might be included as a program objective so that every student has this learning opportunity. Expanded didactic instruction could be included to benefit students not only in peer review but also in disseminating their own work. We feel strongly that editor/faculty collaboration is essential to ensure confidentiality and we suggest that students might work with their advisors in this capacity so that each faculty member is mentoring only two or three students in peer review at one time. After achieving editor approval, faculty mentors might offer repeated student experiences with manuscripts they have agreed to review, gradually allowing the student to assume more of the

responsibility. Course credit through a practicum or independent study could accommodate individual students' interests and career paths.

Clearly, we do not think that jumping into the deep end is the best approach for learning peer review and we challenge our editorial and faculty peers to publish their own experiences in including peer review in formal education. Journal editors and faculty have a clear responsibility, and an exciting opportunity, to prepare the next generation of peer reviewers.

References

- Baggs, J. G., Broome, M. E., Dougherty, M. C., Freda, M. C., & Kearney, M. H. (2008). Blinding in peer review: The preferences of reviewers for nursing journals. *Journal of Advanced Nursing, 64*(2), 131-8. doi: 10.1111/j.1365-2648.2008.04816.x
- Foster, R. (2008). A primer on peer review. *Journal for Specialists in Pediatric Nursing, 13*(1), 1-3. doi: 10.1111/j.1744-6155.2008.00127.x
- Foster, R. L. (2012). Reporting guidelines: CONSORT, PRISMA, and SQUIRE. *Journal for Specialists in Pediatric Nursing, 17*(1), 1-2. doi: 10.1111/j.1744-6155.2011.00319.x
- Moher, D. & Jadad, A. (n.d.). How to peer review a manuscript. Retrieved from <http://www.bmj.com/sites/default/files/attachments/resources/2011/07/moher.pdf>
- Pearson, G. S. (2014). The peer review process. *Perspectives in Psychiatric Care, 50*(2), 77-78. doi: 10.1111/ppc.12068
- Pierson, C. A. (2011). *Reviewing Journal Manuscripts: An easy to follow guide for any nurse reviewing journal manuscripts for publication*. Boston: Blackwell Publishing Ltd.
- Scott-Lichter, D., & the Editorial Policy Committee, Council of Science Editors. (2012). *CSE's White Paper on Promoting Integrity in Scientific Journal Publications, 2012 Update* (3rd Revised Edition). Wheat Ridge, CO.
- Webb, C. (2009). *Writing for publication. An easy-to-follow guide for any nurse thinking of publishing their work*. Retrieved from <http://www.nurseauthoreditor.com/WritingforPublication2009.pdf>
- Witham, G. (2014). Editorial: The peer-review process and the boundaries of 'valid' qualitative research—'where are the three themes?' *Journal of Clinical Nursing, 23*(9-10), 1173–1174, doi: 10.1111/jocn.12536

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